AUTOMOTIVE GRADE

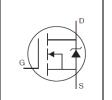
Features

- Logic Level
- Advanced Process Technology
- Ultra Low On-Resistance
- 175°C Operating Temperature
- Fast Switching
- Repetitive Avalanche Allowed up to Tjmax
- · Lead-Free, RoHS Compliant
- Automotive Qualified *

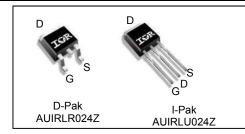
Description

Specifically designed for Automotive applications, this HEXFET® Power MOSFET utilizes the latest processing techniques to achieve extremely low on-resistance per silicon area. Additional features of this design are a 175°C junction operating temperature, fast switching speed and improved repetitive avalanche rating. These features combine to make this design an extremely efficient and reliable device for use in Automotive applications and a wide variety of other applications.





V _{DSS}		55V
R _{DS(on)}	typ.	46mΩ
	max.	58mΩ
I _D		16A



G	D	S
Gate	Drain	Source

Boss nort number	Dookogo Typo	Standard Pack		Orderable Bort Number
Base part number	Package Type	Form	Quantity	Orderable Part Number
AUIRLU024Z	I-Pak	Tube	75	AUIRLU024Z
AUIRI R0247	D. Dok	Tube	75	AUIRLR024Z
AUIRLRU24Z	D-Pak	Tape and Reel Left	3000	AUIRLR024ZTRL

Absolute Maximum Ratings

Stresses beyond those listed under "Absolute Maximum Ratings" may cause permanent damage to the device. These are stress ratings only; and functional operation of the device at these or any other condition beyond those indicated in the specifications is not implied. Exposure to absolute-maximum-rated conditions for extended periods may affect device reliability. The thermal resistance and power dissipation ratings are measured under board mounted and still air conditions. Ambient temperature (TA) is 25°C, unless

•	<u> </u>	. ,	
Symbol	Parameter	Max.	Units
I _D @ T _C = 25°C	Continuous Drain Current, V _{GS} @ 10V	16	
I _D @ T _C = 100°C	Continuous Drain Current, V _{GS} @ 10V	11	Α
I _{DM}	Pulsed Drain Current ①	64	=
P _D @T _C = 25°C	Maximum Power Dissipation	35	W
	Linear Derating Factor	0.23	W/°C
V_{GS}	Gate-to-Source Voltage	± 16	V
E _{AS}	Single Pulse Avalanche Energy (Thermally Limited) ②	25	
E _{AS} (Tested)	Single Pulse Avalanche Energy Tested Value ®	25	- mJ
I _{AR}	Avalanche Current ①	See Fig.15,16, 12a, 12b	Α
E _{AR}	Repetitive Avalanche Energy ©		mJ
T _J	Operating Junction and	-55 to + 175	
T _{STG}	Storage Temperature Range		°C
	Soldering Temperature, for 10 seconds (1.6mm from case)	300	

Thermal Resistance

Symbol	Parameter	Тур.	Max.	Units
$R_{\theta JC}$	Junction-to-Case ®		4.28	
$R_{\theta JA}$	Junction-to-Ambient (PCB Mount) ⑦		50	°C/W
$R_{\theta JA}$	Junction-to-Ambient		110	

HEXFET® is a registered trademark of Infineon.

^{*}Qualification standards can be found at www.infineon.com



Static @ T_J = 25°C (unless otherwise specified)

	Parameter	Min.	Тур.	Max.	Units	Conditions
$V_{(BR)DSS}$	Drain-to-Source Breakdown Voltage	55			V	$V_{GS} = 0V, I_D = 250\mu A$
$\Delta V_{(BR)DSS}/\Delta T_J$	Breakdown Voltage Temp. Coefficient		0.053		V/°C	Reference to 25°C, I _D = 1mA
			46	58		V _{GS} = 10V, I _D = 9.6A ③
R _{DS(on)}	Static Drain-to-Source On-Resistance			80	mΩ	$V_{GS} = 5.0V, I_D = 5.0A$ 3
, ,				100		V_{GS} = 4.5V, I_D = 3.0A ③
$V_{GS(th)}$	Gate Threshold Voltage	1.0		3.0	V	$V_{DS} = V_{GS}, I_{D} = 250 \mu A$
gfs	Forward Trans conductance	7.4			S	V _{DS} = 25V, I _D = 9.6A ③
ı	Drain-to-Source Leakage Current			20	μA	$V_{DS} = 55V, V_{GS} = 0V$
I _{DSS}				250	μΑ	$V_{DS} = 55V, V_{GS} = 0V, T_{J} = 125^{\circ}C$
ı	Gate-to-Source Forward Leakage			200	n 1	V _{GS} = 16V
I _{GSS}	Gate-to-Source Reverse Leakage			-200	nA	V _{GS} = -16V

Dynamic Electrical Characteristics @ T_J = 25°C (unless otherwise specified)

Gate Charge		6.6	9.9		$I_{D} = 5.0A$
-to-Source Charge		1.6		nC	V _{DS} = 44V
-to-Drain Charge		3.9			V _{GS} = 5.0V③
-On Delay Time		8.2			$V_{DD} = 28V$
Time		43		no	$I_{D} = 5.0A$
-Off Delay Time		19		115	$R_G = 28\Omega$
Гime		16			V _{GS} = 5.0V3
nal Drain Inductance		4.5			Between lead, 6mm (0.25in.)
nal Source Inductance		7.5			from package and center of die contact
: Capacitance		380			$V_{GS} = 0V$
ut Capacitance		62			V _{DS} = 25V
erse Transfer Capacitance		39		nΕ	f = 1.0MHz
ut Capacitance		180			$V_{GS} = 0V$, $V_{DS} = 1.0V$ $f = 1.0MHz$
ut Capacitance		50			$V_{GS} = 0V$, $V_{DS} = 44V$ $f = 1.0MHz$
tive Output Capacitance		81			V_{GS} = 0V, V_{DS} = 0V to 44V \oplus
	-to-Source Charge -to-Drain Charge -On Delay Time Time -Off Delay Time Time nal Drain Inductance nal Source Inductance capacitance ut Capacitance erse Transfer Capacitance ut Capacitance ut Capacitance ut Capacitance ut Capacitance	-to-Source Charge —— -to-Drain Charge —— -On Delay Time —— -Off Delay Time —— -Off Delay Time —— -Imal Drain Inductance ——	-to-Source Charge — 1.6 -to-Drain Charge — 3.9 -On Delay Time — 8.2 Time — 43 -Off Delay Time — 19 Time — 16 nal Drain Inductance — 4.5 nal Source Inductance — 7.5 Capacitance — 380 ut Capacitance — 62 erse Transfer Capacitance — 39 ut Capacitance — 180 ut Capacitance — 50	-to-Source Charge — 1.6 — -to-Drain Charge — 3.9 — -On Delay Time — 8.2 — Time — 43 — -Off Delay Time — 19 — rime — 16 — nal Drain Inductance — 4.5 — nal Source Inductance — 7.5 — Capacitance — 380 — ut Capacitance — 39 — ut Capacitance — 180 — ut Capacitance — 50 —	To-Source Charge

Diode Characteristics

	Parameter	Min.	Тур.	Max.	Units	Conditions
I.	Continuous Source Current			16		MOSFET symbol
Is	(Body Diode)			10	_	showing the
	Pulsed Source Current			64	Α	integral reverse
I _{SM}	(Body Diode) ①			- 04		p-n junction diode.
V_{SD}	Diode Forward Voltage			1.3	V	$T_J = 25^{\circ}C, I_S = 9.6A, V_{GS} = 0V$ 3
t _{rr}	Reverse Recovery Time		16	24	ns	$T_J = 25^{\circ}C$, $I_F = 9.6A$, $V_{DD} = 28V$
Q_{rr}	Reverse Recovery Charge		11	17	nC	di/dt = 100A/μs③
t_on	Forward Turn-On Time	Intrinsion	Intrinsic turn-on time is negligible (turn-on is dominated by L _S +L _D)			

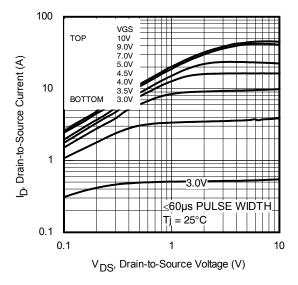
Notes:

- ① Repetitive rating; pulse width limited by max. junction temperature. (See fig. 11)

- Coss eff. is a fixed capacitance that gives the same charging time as Coss while VDS is rising from 0 to 80% VDSS
- $\$ Limited by T_{Jmax} , see Fig.12a, 12b, 15, 16 for typical repetitive avalanche performance.
- © This value determined from sample failure population, starting $T_J = 25$ °C, L = 0.54mH, $R_G = 25$ Ω, $I_{AS} = 9.6$ A, $V_{GS} = 10$ V.
- When mounted on 1" square PCB (FR-4 or G-10 Material). For recommended footprint and soldering techniques refer to application note #AN-994

® R_θ is measured at T_J approximately 90°C.





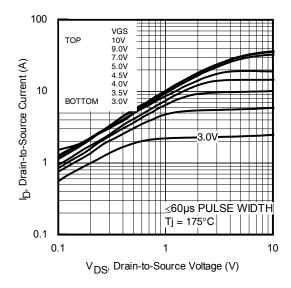
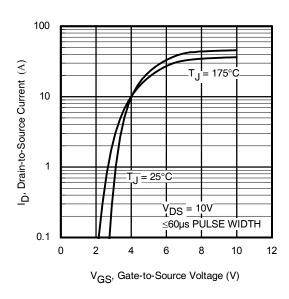


Fig. 1 Typical Output Characteristics

Fig. 2 Typical Output Characteristics





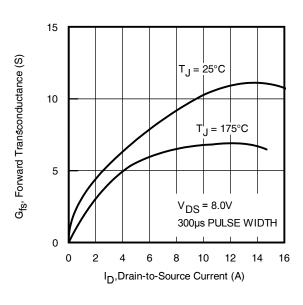


Fig. 4 Typical Forward Trans conductance Vs. Drain Current



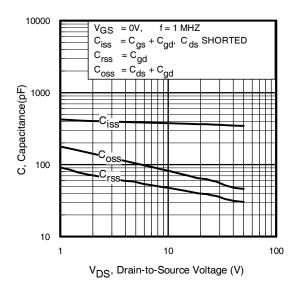


Fig 5. Typical Capacitance vs. Drain-to-Source Voltage

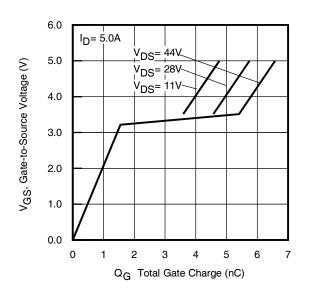


Fig 6. Typical Gate Charge vs. Gate-to-Source Voltage

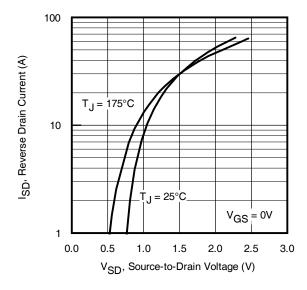


Fig. 7 Typical Source-to-Drain Diode Forward Voltage

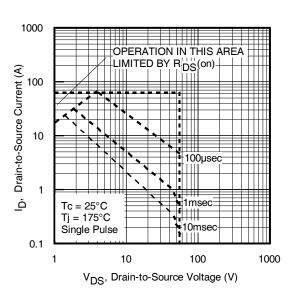
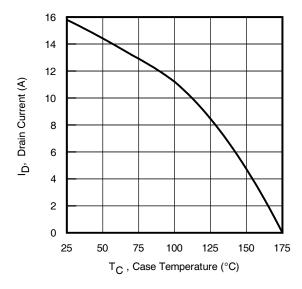


Fig 8. Maximum Safe Operating Area





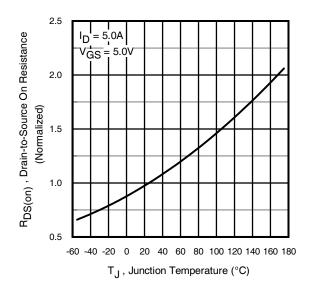


Fig 9. Maximum Drain Current Vs. Case Temperature

Fig 10. Normalized On-Resistance Vs. Temperature

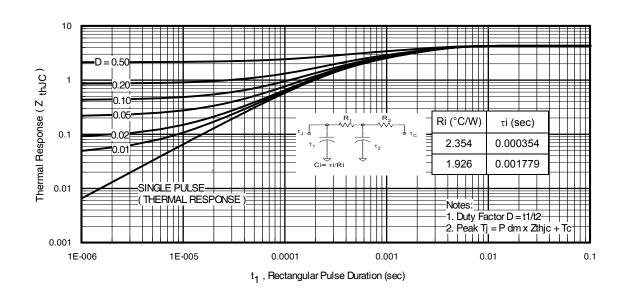


Fig 11. Maximum Effective Transient Thermal Impedance, Junction-to-Case



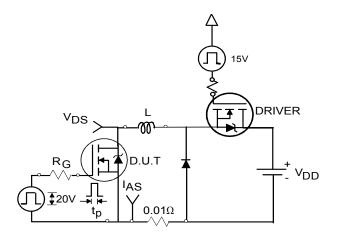


Fig 12a. Unclamped Inductive Test Circuit

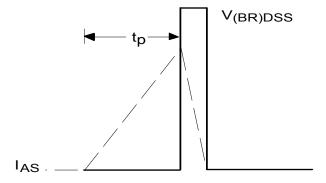


Fig 12b. Unclamped Inductive Waveforms

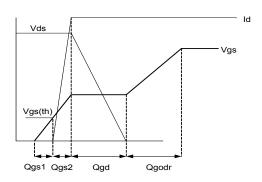


Fig 13a. Gate Charge Waveform

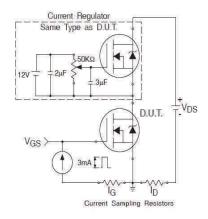


Fig 13b. Gate Charge Test Circuit

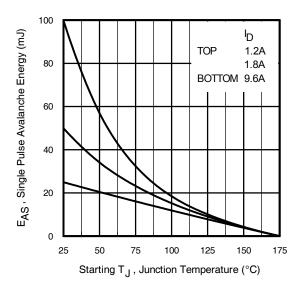


Fig 12c. Maximum Avalanche Energy vs. Drain Current

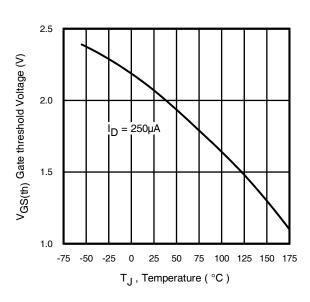


Fig 14. Threshold Voltage Vs. Temperature

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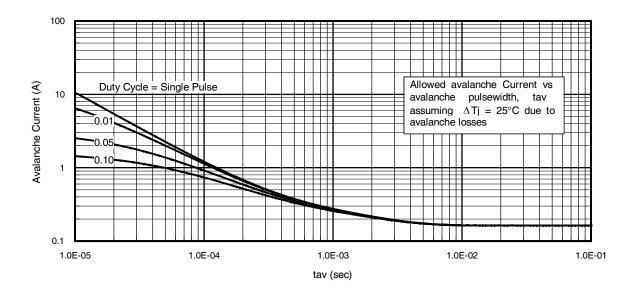


Fig 15. Typical Avalanche Current Vs. Pulse width

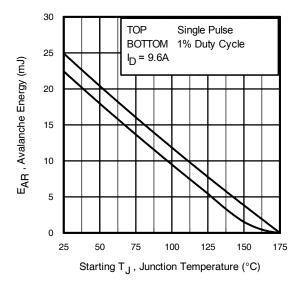


Fig 16. Maximum Avalanche Energy Vs. Temperature

Notes on Repetitive Avalanche Curves, Figures 15, 16:

(For further info, see AN-1005 at www.infineon.com)

- Avalanche failures assumption:
 Purely a thermal phenomenon and failure occurs at a temperature far in excess of T_{imax}. This is validated for every part type.
- 2. Safe operation in Avalanche is allowed as long as T_{jmax} is not exceeded.
- 3. Equation below based on circuit and waveforms shown in Figures 12a, 12b.
- 4. PD (ave) = Average power dissipation per single avalanche pulse.
- 5. BV = Rated breakdown voltage (1.3 factor accounts for voltage increase during avalanche).
- 6. Iav = Allowable avalanche current.
- 7. ΔT = Allowable rise in junction temperature, not to exceed T_{jmax} (assumed as 25°C in Figure 15, 16).

tav = Average time in avalanche.

D = Duty cycle in avalanche = tav ·f

ZthJC(D, tav) = Transient thermal resistance, see Figures 13)

$$\begin{split} P_{D \; (ave)} &= 1/2 \; (\; 1.3 \cdot BV \cdot I_{av}) = \Delta T / \; Z_{thJC} \\ I_{av} &= 2\Delta T / \; [1.3 \cdot BV \cdot Z_{th}] \\ E_{AS \; (AR)} &= P_{D \; (ave)} \cdot t_{av} \end{split}$$



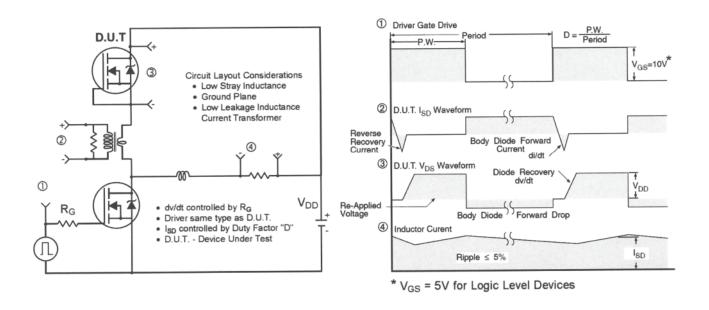
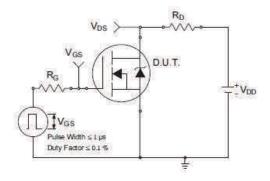
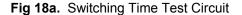


Fig 17. Peak Diode Recovery dv/dt Test Circuit for N-Channel HEXFET® Power MOSFETs





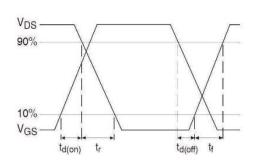
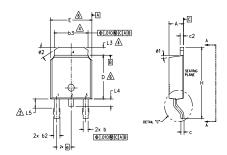


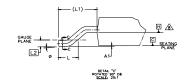
Fig 18b. Switching Time Waveforms

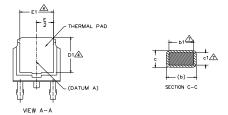


D-Pak (TO-252AA) Package Outline (Dimensions are shown in millimeters (inches))









NOTES:

- 1.- DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994
- 2.- DIMENSION ARE SHOWN IN INCHES [MILLIMETERS].
- 3- LEAD DIMENSION UNCONTROLLED IN L5.
- A- DIMENSION D1, E1, L3 & b3 ESTABLISH A MINIMUM MOUNTING SURFACE FOR THERMAL PAD.
- 5.- SECTION C-C DIMENSIONS APPLY TO THE FLAT SECTION OF THE LEAD BETWEEN .005 AND 0.10 [0.13 AND 0.25] FROM THE LEAD TIP.
- ⚠_ DIMENSION D & E DO NOT INCLUDE MOLD FLASH. MOLD FLASH SHALL NOT EXCEED .005 [0.13] PER SIDE. THESE DIMENSIONS ARE MEASURED AT THE OUTMOST EXTREMES OF THE PLASTIC BODY.
- A- DIMENSION b1 & c1 APPLIED TO BASE METAL ONLY.
- 9.- OUTLINE CONFORMS TO JEDEC OUTLINE TO-252AA.

DIMENSIONS N O T T T T T T T T T T T T T T T T T T							
B O L MILLIMETERS INCHES T T S S S S S S S S S S S S S S S S S S							
A 2.18 2.39 .086 .094 A1 — 0.013 — .005 b 0.64 0.89 .025 .035 b1 0.65 0.79 .025 .031 7 b2 0.76 1.14 .030 .045 4 c3 4.95 5.46 .195 .215 4 c 0.46 0.61 .018 .022 7 c2 0.46 0.89 .018 .035 D 5.97 6.22 .235 .245 6 D1 5.21 — .205 — 4 E 6.35 6.73 .250 .265 6 E1 4.32 — .170 — 4 e 2.29 BSC .090 BSC H 9.40 10.41 .370 .410 L 1.40 1.78 .055 .070	В	MILLIMETERS		INC	INCHES		
A1 — 0.13 — .005 b 0.64 0.89 .025 .035 b1 0.65 0.79 .025 .031 7 b2 0.76 1.14 .030 .045 b3 4.95 5.46 .195 .215 4 c 0.46 0.61 .018 .024 7 c2 0.46 0.89 .018 .035 D 597 6.22 .235 .245 6 D1 5.21 — .205 — 4 4 6 7 4 4 6 6 6 6 6 6 6 6 6 6 7 7 4 4 6 9 </td <td></td> <td>MIN.</td> <td>MAX.</td> <td>MIN.</td> <td>MAX.</td> <td>S</td>		MIN.	MAX.	MIN.	MAX.	S	
b 0.64 0.89 .025 .035 b1 0.65 0.79 .025 .031 7 b2 0.76 1.14 .030 .045 b3 4.95 5.46 .195 .215 4 c 0.46 0.61 .018 .024 c1 0.41 0.56 .016 .022 7 c2 0.46 0.89 .018 .035 D 5.97 6.22 .235 .245 6 D1 5.21 - .205 - 4 E 6.35 6.73 .250 .265 6 E1 4.32 - .170 - 4 e 2.29 BSC .090 BSC H 9.40 10.41 .370 .410 L 1.40 1.78 .055 .070 L1 2.74 BSC .108 REF. L2 <td>Α</td> <td>2.18</td> <td>2.39</td> <td>.086</td> <td>.094</td> <td></td>	Α	2.18	2.39	.086	.094		
b1 0.65 0.79 .025 .031 7 b2 0.76 1.14 .030 .045 b3 4.95 5.46 .195 .215 4 c 0.46 0.61 .018 .024 c1 0.41 0.56 .016 .022 7 c2 0.46 0.89 .018 .035 6 D 5.97 6.22 .235 .245 6 D1 5.21 - .205 - 4 E 6.35 6.73 .250 .265 6 E1 4.32 - .170 - 4 e 2.29 BSC .090 BSC H 9.40 10.41 .370 .410 L 1.40 1.78 .055 .070 L1 2.74 BSC .108 REF. L2 0.51 BSC .020 BSC	A1	-	0.13	-	.005		
b2 0.76 1.14 .030 .045 b3 4.95 5.46 .195 .215 4 c 0.46 0.61 .018 .024 c1 0.41 0.56 .016 .022 7 c2 0.46 0.89 .018 .035 D 5.97 6.22 .235 .245 6 D1 5.21 - .205 - 4 E 6.35 6.73 .250 .265 6 E1 4.32 - .170 - 4 e 2.29 BSC .090 BSC H 9.40 10.41 .370 .410 L 1.40 1.78 .055 .070 L1 2.74 BSC .020 BSC L2 0.51 BSC .020 BSC L3 0.89 1.27 .035 .050 4 L4	b	0.64	0.89	.025	.035		
b3 4.95 5.46 .195 .215 4 c 0.46 0.61 .018 .024 c1 0.41 0.56 .016 .022 7 c2 0.46 0.89 .018 .035 D 5.97 6.22 .235 .245 6 D1 5.21 - .205 - 4 E 6.35 6.73 .250 .265 6 E1 4.32 - .170 - 4 e 2.29 BSC .090 BSC H 9.40 10.41 .370 .410 L 1.40 1.78 .055 .070 L1 2.74 BSC .108 REF. L2 0.51 BSC .020 BSC L3 0.89 1.27 .035 .050 4 L4 - 1.02 - .040 L5	ь1	0.65	0.79	.025	.031	7	
c 0.46 0.61 .018 .024 c1 0.41 0.56 .016 .022 7 c2 0.46 0.89 .018 .035 D 5.97 6.22 .235 .245 6 D1 5.21 - .205 - 4 E 6.35 6.73 .250 .265 6 E1 4.32 - .170 - 4 e 2.29 BSC .090 BSC H 9.40 10.41 .370 .410 L 1.40 1.78 .055 .070 L1 2.74 BSC .108 REF. L2 0.51 BSC .020 BSC L3 0.89 1.27 .035 .050 4 L4 - 1.02 - .040 L5 1.14 1.52 .045 .060 3 Ø	b2	0.76	1,14	.030	.045		
c1 0.41 0.56 .016 .022 7 c2 0.46 0.89 .018 .035 D 5.97 6.22 .235 .245 6 D1 5.21 - .205 - 4 E 6.35 6.73 .250 .265 6 E1 4.32 - .170 - 4 e 2.29 BSC .090 BSC H 9.40 10.41 .370 .410 L 1.40 1.78 .055 .070 L1 2.74 BSC .108 REF. L2 0.51 BSC .020 BSC L3 0.89 1.27 .035 .050 4 L4 - 1.02 - .040 L5 1.14 1.52 .045 .060 3 Ø 0° 10° 0° 10° Ø	b3	4.95	5.46	.195	.215	4	
c2 0.46 0.89 .018 .035 D 5.97 6.22 .235 .245 6 D1 5.21 - .205 - 4 E 6.35 6.73 .250 .265 6 E1 4.32 - .170 - 4 e 2.29 BSC .090 BSC H 9.40 10.41 .370 .410 L 1.40 1.78 .055 .070 L1 2.74 BSC .108 REF. L2 0.51 BSC .020 BSC L3 0.89 1.27 .035 .050 4 L4 - 1.02 - .040 L5 1.14 1.52 .045 .060 3 Ø 0° 10° 0° 10° 0° 10° Ø 10° 0° 15° 0° 15° 0°	С	0.46	0.61	.018	.024		
D 5.97 6.22 .235 .245 6 D1 5.21 - .205 - 4 E 6.35 6.73 .250 .265 6 E1 4.32 - .170 - 4 e 2.29 BSC .090 BSC H 9.40 10.41 .370 .410 L 1.40 1.78 .055 .070 L1 2.74 BSC .108 REF. L2 0.51 BSC .020 BSC L3 0.89 1.27 .035 .050 4 L4 - 1.02 - .040 L5 1.14 1.52 .045 .060 3 Ø 0° 10° 0° 10° 0° 10° Ø1 0° 15° 0° 15° 0° 15°	c1	0.41	0.56	.016	.022	7	
D1 5.21 -	c2	0.46	0.89	.018	.035		
E 6.35 6.73 .250 .265 6 E1 4.32170 - 4 e 2.29 BSC .090 BSC H 9.40 10.41 .370 .410 L 1.40 1.78 .055 .070 L1 2.74 BSC .108 REF. L2 0.51 BSC .035 .050 4 L4 - 1.02040 L5 1.14 1.52 .045 .060 3 Ø 0' 10' 0' 10' Ø1 0' 15' 0' 15'	D	5.97	6.22	.235	.245	6	
E1 4.32170 - 4 e 2.29 BSC .090 BSC H 9.40 10.41 .370 .410 L 1.40 1.78 .055 .070 L1 2.74 BSC .108 REF. L2 0.51 BSC .020 BSC L3 0.89 1.27 .035 .050 4 L4 - 1.02040 L5 1.14 1.52 .045 .060 3 Ø 0' 10' 0' 10' Ø1 0' 15' 0' 15'	D1	5.21	-	.205	-	4	
Record R	Ε	6.35	6.73	.250	.265	6	
H 9.40 10.41 .370 .410 L 1.40 1.78 .055 .070 L1 2.74 BSC .108 REF. L2 0.51 BSC .020 BSC L3 0.89 1.27 .035 .050 4 L4 - 1.02040 L5 1.14 1.52 .045 .060 3 Ø 0' 10' 0' 10' 0' 10' Ø1 0' 15' 0' 15'	E1	4.32	-	.170	-	4	
L 1.40 1.78 .055 .070 L1 2.74 BSC .108 REF. L2 0.51 BSC .020 BSC L3 0.89 1.27 .035 .050 4 L4 - 1.02 - .040 L5 1.14 1.52 .045 .060 3 Ø 0° 10° 0° 10° Ø1 0° 15° 0° 15°	е	2.29	2.29 BSC		BSC		
L1 2.74 BSC .108 REF. L2 0.51 BSC .020 BSC L3 0.89 1.27 .035 .050 4 L4 - 1.02 - .040 L5 1.14 1.52 .045 .060 3 Ø 0° 10° 0° 10° Ø1 0° 15° 0° 15°	Н	9.40	10.41	.370	.410		
L2 0.51 BSC .020 BSC L3 0.89 1.27 .035 .050 4 L4 - 1.02 - .040 L5 1.14 1.52 .045 .060 3 Ø 0° 10° 0° 10° Ø1 0° 15° 0° 15°	L	1.40	1.78	.055	.070		
L3 0.89 1.27 .035 .050 4 L4 - 1.02 - .040 L5 1.14 1.52 .045 .060 3 Ø 0° 10° 0° 10° Ø1 0° 15° 0° 15°	L1	2.74	BSC	.108 REF.			
L4 - 1.02040 L5 1.14 1.52 .045 .060 3 Ø 0' 10' 0' 10' Ø1 0' 15' 0' 15'	L2	0.51	BSC	.020			
L5 1.14 1.52 .045 .060 3 Ø 0' 10' 0' 10' Ø1 0' 15' 0' 15'	L3	0.89	1.27	.035	.050	4	
ø 0° 10° 0° 10° ø 0° 15° 0° 15°	L4	-	1.02		.040		
ø1 0° 15° 0° 15°	L5	1.14	1.52	.045	.060	3	
	ø	0,	10*	0,	10°		
ø2 25° 35° 25° 35°	ø1	0,	15*	0,	15*		
	ø2	25*	35*	25*	35°		

LEAD ASSIGNMENTS

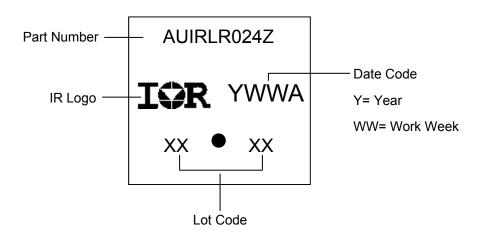
HEXFET

- 1.- GATE
- 2.- DRAIN
- 3.- SOURCE 4.- DRAIN

IGBT & CoPAK

- 1.- GATE
- 2.- COLLECTOR 3.- EMITTER
- 4.- COLLECTOR

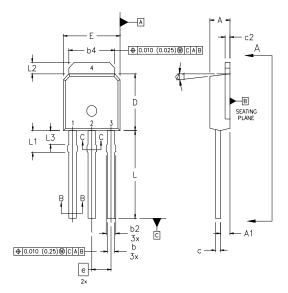
D-Pak (TO-252AA) Part Marking Information

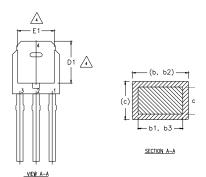


2017-10-09



I-Pak (TO-251AA) Package Outline (Dimensions are shown in millimeters (inches)





NOTES:

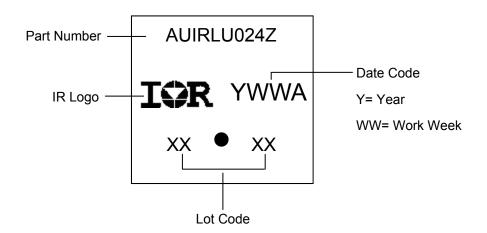
- 1 DIMENSIONING AND TOLERANCING PER ASME Y14.5 M- 1994.
- 2 DIMENSIONS ARE SHOWN IN MILLIMETERS [INCHES].
- JIMENSION D & E DO NOT INCLUDE MOLD FLASH. MOLD FLASH SHALL NOT EXCEED 0.005" (0.127) PER SIDE. THESE DIMENSIONS ARE MEASURED AT THE OUTERMOST EXTREMES OF THE PLASTIC BODY.
- 4 THERMAL PAD CONTOUR OPTION WITHIN DIMENSION 64, L2, E1 & D1.
- LEAD DIMENSION UNCONTROLLED IN L3.
- 6 DIMENSION 61, 63 APPLY TO BASE METAL ONLY.
 7 OUTLINE CONFORMS TO JEDEC OUTLINE TO-251AA.
 - 8 CONTROLLING DIMENSION : INCHES.

LEAD ASSIGNMENTS

<u>HEXFET</u>

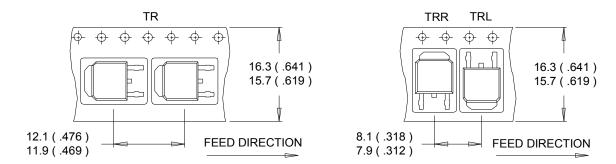
- 1.- GATE
 2.- DRAIN
 3.- SOURCE
 4.- DRAIN
- DIMENSIONS SYMBOL MILLIMETERS INCHES MIN. NOTES MIN. 2.18 2.39 0.086 .094 Α1 0.045 0.89 1.14 0.035 0.64 0.025 b 0.89 0.035 ь1 0.64 0.79 0.025 0.031 b2 0.76 1.14 0.030 0.045 b3 0.76 1.04 0.030 0.041 b4 5.00 0.195 0.215 0.46 0.61 0.018 0.024 0.56 0.022 c1 0.41 0.016 c2 .046 0.86 0.018 0.035 D 5.97 6.22 0.235 0.245 D1 5.21 0.205 6.35 6.73 0.250 0.265 3, 4 0.170 E1 4.32 0.090 BSC 0.350 0.380 L 8.89 9.60 L1 1.91 2.29 0.075 0.090 L2 0.89 1.27 0.035 0.050 L3 1.14 1.52 0.045 0.060 0* 15 0* 15*

I-Pak (TO-251AA) Part Marking Information



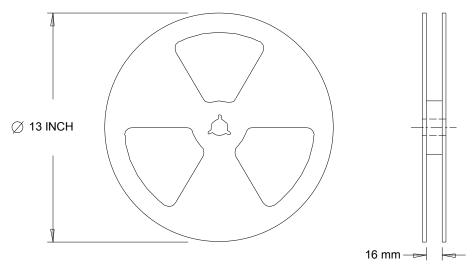


D-Pak (TO-252AA) Tape & Reel Information (Dimensions are shown in millimeters (inches))



NOTES:

- 1. CONTROLLING DIMENSION: MILLIMETER.
- 2. ALL DIMENSIONS ARE SHOWN IN MILLIMETERS (INCHES).
- 3. OUTLINE CONFORMS TO EIA-481 & EIA-541.



NOTES:

1. OUTLINE CONFORMS TO EIA-481.



Qualification Information

4000000						
		Automotive (per AEC-Q101)				
		Comments: This part number(s) passed Automotive qualification. Infineon's Industrial and Consumer qualification level is granted by extension of the higher Automotive level.				
		D-Pak	MCI 1			
Woisture	Moisture Sensitivity Level		MSL1			
	Manhina Madal		Class M1B (+/-100V) [†]			
	Machine Model	AEC-Q101-002				
FOD	Liverson Dady Madal	Class H0 (+/-250V) [†]				
ESD	Human Body Model	AEC-Q101-001				
	Observad Davisa Madal	Class C5 (+/-1125V) [†]				
	Charged Device Model	AEC-Q101-005				
RoHS Compliant			Yes			

[†] Highest passing voltage.

Revision History

Date	Comments
12/11/2015	 Updated datasheet with corporate template Corrected ordering table on page 1. Corrected typo RTHJA -(PCB Mount) from "40°C/W" to "50°C/W" on page 1.
10/09/2017	Corrected typo error on part marking on page 9,10.

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