



Micro Commercial Components



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2SC2859-O
2SC2859-Y
2SC2859-GR

NPN
Plastic-Encapsulate
Transistors

Features

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Switching Applications
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Halogen free available upon request by adding suffix "-HF"

Maximum Ratings

Symbol	Rating	Rating	Unit
V _{CEO}	Collector-Emitter Voltage	30	V
V _{CBO}	Collector-Base Voltage	35	V
V _{EBO}	Emitter-Base Voltage	5.0	V
I _C	Collector Current	500	mA
P _C	Collector power dissipation	150	mW
R _{thJA}	Thermal Resistance From Junction to Ambient	833	°C/W
T _J	Junction Temperature	-55 to +150	°C
T _{STG}	Storage Temperature	-55 to +150	°C

Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Typ	Max	Units
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OFF CHARACTERISTICS

I _{CBO}	Collector Cutoff Current (V _{CB} =35Vdc, I _E =0)	---	---	0.1	μA
I _{EBO}	Emitter Cutoff Current (V _{EB} =5.0Vdc, I _C =0)	---	---	0.1	μA

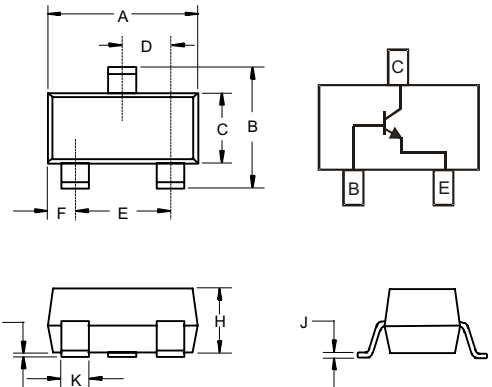
ON CHARACTERISTICS

V _{(BR)CEO}	Collector-Emitter Breakdown Voltage (I _C =1mA, I _B =0)	30	---	---	V
V _{(BR)CBO}	Collector-Base Breakdown Voltage (I _C =100μA, I _E =0)	35	---	---	V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage (I _E =100μA, I _C =0)	5.0	---	---	V
h _{FE}	DC Current Gain* (I _C =100mAdc, V _{CE} =1.0Vdc) (I _C =400mAdc, V _{CE} =6.0Vdc)	70 25	---	400 ---	---
V _{BE}	Base-emitter Voltage (V _{CE} =1Vdc, I _C =100mAdc)	---	---	1.0	V
V _{CE(sat)}	Collector Saturation Voltage (I _C =100mAdc, I _B =10mAdc)	---	---	0.25	V
C _{ob}	Output Capacitance (V _{CB} =6V, I _E =0, f=1MHz)	---	7.0	---	pF
f _T	Gain Bandwidth product (V _{CE} =6Vdc, I _C =20mAdc)	---	300	---	MHz

CLASSIFICATION OF h_{FE}

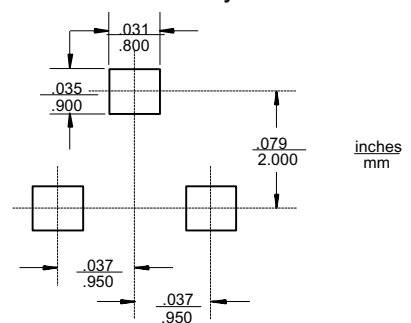
Rank	O	Y	GR
Range	70-140	120-240	200-400
Range	25Min	40Min	70Min
Marking	WO	WY	WG

SOT-23



DIM	DIMENSIONS				NOTE
	INCHES		MM		
A	.110	.120	2.80	3.04	
B	.083	.104	2.10	2.64	
C	.047	.055	1.20	1.40	
D	.035	.041	.89	1.03	
E	.070	.081	1.78	2.05	
F	.018	.024	.45	.60	
G	.0005	.0039	.013	.100	
H	.035	.044	.89	1.12	
J	.003	.007	.085	.180	
K	.015	.020	.37	.51	

Suggested Solder Pad Layout





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Ordering Information :

Device	Packing
Part Number-TP	Tape & Reel; 3 Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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