

NPN SILICON LOW POWER TRANSISTOR

Qualified per MIL-PRF-19500/376

DEVICES

2N2484UA
2N2484UB
2N2484UBC *

* Available to JANS quality level only.

LEVELS

JAN
JANTX
JANTXV
JANS

ABSOLUTE MAXIMUM RATINGS ($T_C = +25^\circ\text{C}$ unless otherwise noted)

Parameters / Test Conditions	Symbol	Value	Unit
Collector-Emitter Voltage	V_{CEO}	60	Vdc
Collector-Base Voltage	V_{CBO}	60	Vdc
Emitter-Base Voltage	V_{EBO}	6.0	Vdc
Collector Current	I_C	50	mAdc
Total Power Dissipation @ $T_A = +25^\circ\text{C}$ ⁽¹⁾	P_T	360	mW
Operating & Storage Junction Temperature Range	T_J, T_{stg}	-65 to +200	$^\circ\text{C}$

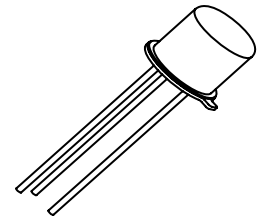
THERMAL CHARACTERISTICS

Parameters / Test Conditions	Symbol	Value	Unit
Thermal Resistance, Ambient-to-Case	$R_{\theta JA}$		$^\circ\text{C/W}$
2N2484		325	
2N2484UA		275	
2N2484UB, UBC		350	

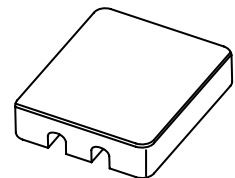
1. See 19500/376 for Thermal Performance Curves.

ELECTRICAL CHARACTERISTICS ($T_A = +25^\circ\text{C}$, unless otherwise noted)

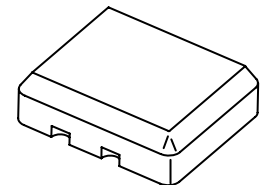
Parameters / Test Conditions	Symbol	Min.	Max.	Unit
OFF CHARACTERISTICS				
Collector-Emitter Breakdown Voltage $I_C = 10\text{mAdc}$	$V_{(BR)CEO}$	60		Vdc
Collector-Emitter Cutoff Current $V_{CE} = 45\text{Vdc}$	I_{CES}		5.0	ηAdc
Collector-Base Cutoff Current $V_{CB} = 45\text{Vdc}$ $V_{CB} = 60\text{Vdc}$	I_{CBO}		5.0 10	ηAdc μAdc
Collector-Emitter Cutoff Current $V_{CE} = 5.0\text{Vdc}$	I_{CEO}		2.0	ηAdc



TO-18 (TO-206AA)
2N2484



2N2484UA



2N2484UB, UBC
(UBC = Ceramic Lid Version)

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ELECTRICAL CHARACTERISTICS ($T_A = +25^\circ\text{C}$, unless otherwise noted)

Parameters / Test Conditions	Symbol	Min.	Max.	Unit
OFF CHARACTERISTICS				
Emitter-Base Cutoff Current $V_{EB} = 5.0\text{Vdc}$ $V_{EB} = 6.0\text{Vdc}$	I_{EBO}		2.0 10	ηAdc μAdc
ON CHARACTERISTICS ⁽²⁾				
Forward-Current Transfer Ratio $I_C = 1.0\mu\text{Adc}$, $V_{CE} = 5.0\text{Vdc}$ $I_C = 10\mu\text{Adc}$, $V_{CE} = 5.0\text{Vdc}$ $I_C = 100\mu\text{Adc}$, $V_{CE} = 5.0\text{Vdc}$ $I_C = 500\mu\text{Adc}$, $V_{CE} = 5.0\text{Vdc}$ $I_C = 1.0\text{mAdc}$, $V_{CE} = 5.0\text{Vdc}$ $I_C = 10\text{mAdc}$, $V_{CE} = 5.0\text{Vdc}$	h_{FE}	45 200 225 250 250 225	500 675 800 800	
Collector-Emitter Saturation Voltage $I_C = 1.0\text{mAdc}$, $I_B = 100\mu\text{Adc}$	$V_{CE(sat)}$		0.3	Vdc
Base-Emitter Voltage $V_{CE} = 5.0\text{Vdc}$, $I_C = 100\mu\text{Adc}$	$V_{BE(ON)}$	0.5	0.7	Vdc

DYNAMIC CHARACTERISTICS

Parameters / Test Conditions	Symbol	Min.	Max.	Unit
Forward Current Transfer Ratio $I_C = 50\mu\text{Adc}$, $V_{CE} = 5.0\text{Vdc}$, $f = 5.0\text{MHz}$ $I_C = 500\mu\text{Adc}$, $V_{CE} = 5.0\text{Vdc}$, $f = 30\text{MHz}$	$ h_{fe} $	3.0 2.0	0.7	
Open Circuit Output Admittance $I_C = 1.0\text{mAdc}$, $V_{CE} = 5.0\text{Vdc}$, $f = 1.0\text{kHz}$	h_{oe}		40	μmhos
Open Circuit Reverse-Voltage Transfer Ratio $I_C = 1.0\text{mAdc}$, $V_{CE} = 5.0\text{Vdc}$, $f = 1.0\text{kHz}$	h_{re}		8.0×10^{-4}	
Input Impedance $I_C = 1.0\text{mAdc}$, $V_{CE} = 5.0\text{Vdc}$, $f = 1.0\text{kHz}$	h_{je}	3.5	24	$\text{k}\Omega$
Small-Signal Short-Circuit Forward Current Transfer Ratio $I_C = 1.0\text{mAdc}$, $V_{CE} = 5.0\text{Vdc}$, $f = 1.0\text{kHz}$	h_{fe}	250	900	
Output Capacitance $V_{CB} = 5.0\text{Vdc}$, $I_E = 0$, $100\text{kHz} \leq f \leq 1.0\text{MHz}$	C_{obo}		5.0	pF
Input Capacitance $V_{EB} = 0.5\text{Vdc}$, $I_C = 0$, $100\text{kHz} \leq f \leq 1.0\text{MHz}$	C_{ibo}		6.0	pF

(2) Pulse Test: Pulse Width = 300 μs , Duty Cycle $\leq 2.0\%$.