

NPN SILICON MEDIUM POWER TRANSISTOR

Devices

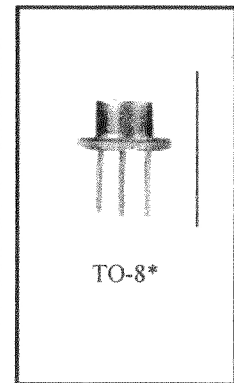
2N1483 2N1484 2N1485 2N1486

MAXIMUM RATINGS

Ratings	Symbol	2N1483 2N1485	2N1484 2N1486	Unit
Collector-Emitter Voltage	V_{CEO}	40	55	Vdc
Collector-Base Voltage	V_{CBO}	60	100	Vdc
Emitter-Base Voltage	V_{EBO}	12		Vdc
Collector Current -- Continuous	I_C	3.0		Adc
Total Power Dissipation	P_T	@ $T_A = 25^\circ\text{C}$ ⁽¹⁾		1.75
		@ $T_C = 25^\circ\text{C}$ ⁽²⁾		25
Operating & Storage Junction Temperature Range	T_J, T_{stg}	-65 to +200		$^\circ\text{C}$

1) Derate linearly 0.010 W/ $^\circ\text{C}$ for $T_A > 25^\circ\text{C}$

2) Derate linearly 0.143 W/ $^\circ\text{C}$ for $T_C > 25^\circ\text{C}$



*See Appendix A for
Package Outline

ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Min.	Max.	Unit
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OFF CHARACTERISTICS

Collector-Emitter Breakdown Voltage $I_C = 100 \text{ mAdc}$	2N1483, 2N1485 2N1484, 2N1486	$V_{(BR)CEO}$	40 55	Vdc
Collector-Base Breakdown Voltage $I_C = 100 \mu\text{Adc}$	2N1483, 2N1485 2N1484, 2N1486	$V_{(BR)CBO}$	60 100	Vdc
Collector-Emitter Breakdown Voltage $V_{EB} = 1.5 \text{ Vdc}, I_C = 0.25 \text{ mAdc}$	2N1483, 2N1485 2N1484, 2N1486	$V_{(BR)CEX}$	60 100	Vdc
Collector-Base Cutoff Current $V_{CB} = 30 \text{ Vdc}$ $V_{CB} = 50 \text{ Vdc}$	2N1483, 2N1485 2N1484, 2N1486	I_{CBO}		15 15 μAdc
Emitter-Base Cutoff Current $V_{EB} = 12 \text{ Vdc}$		I_{EBO}		15 μAdc

2N1483, 2N1484, 2N1485, 2N1486
ELECTRICAL CHARACTERISTICS (cont)

Characteristics	Symbol	Min.	Max.	Unit
ON CHARACTERISTICS ⁽³⁾				
Forward-Current Transfer Ratio $I_C = 750 \text{ mAdc}, V_{CE} = 4.0 \text{ Vdc}$	h_{FE}	20 35	60 100	
Collector-Emitter Saturation Voltage $I_C = 750 \text{ mAdc}, I_B = 75 \text{ mAdc}$ $I_C = 750 \text{ mAdc}, I_B = 40 \text{ mAdc}$	$V_{CE(sat)}$		1.20 0.75	Vdc
Base-Emitter Voltage $I_C = 750 \text{ mAdc}, V_{CE} = 4.0 \text{ Vdc}$	V_{BE}		2.0	Vdc
DYNAMIC CHARACTERISTICS				
Forward Current Transfer Ratio $I_C = 5.0 \text{ mAdc}, V_{CB} = 28 \text{ Vdc}$	f_{hfb}	600		kHz
Output Capacitance $V_{CB} = 10 \text{ Vdc}, I_E = 0, 100 \text{ kHz} \leq f \leq 1.0 \text{ MHz}$	C_{obo}		400	pF
SWITCHING CHARACTERISTICS				
Turn-On Time $V_{CC} = 12 \text{ Vdc}; R_C = 15.9 \Omega; I_{B0} = I_{B2} = 35 \text{ mAdc}; I_{B1} = 65 \text{ mAdc}$	$t_{on} + t_{off}$		25	μs

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