

NPN SILICON MEDIUM POWER TRANSISTOR

Qualified per MIL-PRF-19500/207

Devices

Qualified Level

2N1479 2N1480 2N1481 2N1482

MAXIMUM RATINGS

Ratings	Symbol	2N1479 2N1481	2N1480 2N1482	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	I_C	1.5		Adc
Base-Current	I_B	1.0		Adc
Total Power Dissipation @ $T_A = 25^\circ\text{C}$	P_T	1.0		W
Operating & Storage Junction Temperature Range	T_J, T_{stg}	-65 to +200		$^\circ\text{C}$

THERMAL CHARACTERISTICS

Characteristics	Symbol	Max.	Unit
Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	35	$^\circ\text{C/W}$



TO-5*

*See Appendix A for Package Outline

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

Characteristics	Symbol	Min.	Max.	Unit
-----------------	--------	------	------	------

OFF CHARACTERISTICS

Collector-Emitter Breakdown Voltage $I_C = 50 \text{ mAdc}$	2N1479, 2N1481 2N1480, 2N1482	$V_{(BR)CEO}$	40 55	Vdc
Collector-Emitter Breakdown Voltage $V_{EB} = 1.5 \text{ Vdc}, I_C = 0.25 \text{ mAdc}$ $V_{EB} = 1.5 \text{ Vdc}, I_C = 0.25 \text{ mAdc}$	2N1479, 2N1481 2N1480, 2N1482	$V_{(BR)CEX}$	60 100	Vdc
Collector-Base Cutoff Current $V_{CB} = 30 \text{ Vdc}$ $V_{CB} = 50 \text{ Vdc}$	2N1479, 2N1481 2N1480, 2N1482	I_{CBO}	5.0 5.0	μAdc
Emitter-Base Cutoff Current $V_{EB} = 12 \text{ Vdc}$		I_{EBO}	10	μAdc

2N1479, 2N1480, 2N1481, 2N1482 JAN SERIES

ELECTRICAL CHARACTERISTICS (con't)

Characteristics	Symbol	Min.	Max.	Unit
ON CHARACTERISTICS ⁽¹⁾				
Forward-Current Transfer Ratio $I_C = 200 \text{ mAdc}, V_{CE} = 4.0 \text{ Vdc}$ 2N1479, 2N1480 2N1481, 2N1482	h_{FE}	20 35	60 100	
Collector-Emitter Saturation Voltage $I_C = 200 \text{ mAdc}, I_B = 20 \text{ mAdc}$ $I_C = 200 \text{ mAdc}, I_B = 10 \text{ mAdc}$ 2N1479, 2N1480 2N1481, 2N1482	$V_{CE(sat)}$		0.75 0.75	Vdc
Base-Emitter Voltage $I_C = 200 \text{ mAdc}, V_{CE} = 4.0 \text{ Vdc}$	V_{BE}		1.5	Vdc

DYNAMIC CHARACTERISTICS

Forward Current Cutoff Frequency $I_C = 5.0 \text{ mAdc}, V_{CB} = 28 \text{ Vdc}$	f_{ab}	800		kHz
---	----------	-----	--	-----

SWITCHING CHARACTERISTICS

Total Switching Time $V_{CC} = 12 \text{ Vdc}; R_C = 59 \Omega; I_{B0} = I_{B2} = 8.5 \text{ mAdc}; I_{B1} = 20 \text{ mAdc}$	$t_{on} + t_{off}$		25	μs
--	--------------------	--	----	---------------

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