

## NPN SILICON MEDIUM POWER TRANSISTOR

Qualified per MIL-PRF-19500/207

### Devices

2N1479      2N1480      2N1481      2N1482

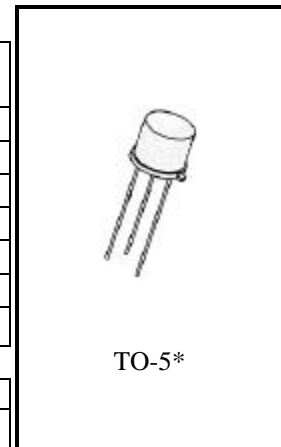
### Qualified Level

### 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	$^\circ\text{C/W}$



\*See Appendix A for Package Outline

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

Characteristics	Symbol	Min.	Max.	Unit
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### 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	$\mu\text{Adc}$
Emitter-Base Cutoff Current $V_{EB} = 12 \text{ Vdc}$		$I_{EBO}$	10	$\mu\text{Adc}$

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

**ELECTRICAL CHARACTERISTICS (con't)**

Characteristics	Symbol	Min.	Max.	Unit
<b>ON CHARACTERISTICS <sup>(1)</sup></b>				
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
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**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	$\mu\text{s}$
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(1) Pulse Test: Pulse Width = 300 $\mu\text{s}$ , Duty Cycle  $\leq$  2.0%.