NEW ENGLAND SEMICONDUCTOR

TECHNICAL DATA

2N1479 JAN, JTX, JTXV
2N1480 JAN, JTX, JTXV
2N1481 JAN, JTX, JTXV
2N1482 JAN, JTX, JTXV

MIL-PRF QPL DEVICES

Processed per MIL-PRF-19500/207

NPN SILICON MEDIUM-POWER TRANSISTOR

MAXIMUM RATINGS

Ratings	Symbol	2N1479 2N1481	2N1480 2N1482	Units
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 @ $T_A = 25^0C$	P_T	1.0		W
Operating & Storage Junction Temperature Range	T_J, T_{stg}	-65 to +200		^0C

TO-5

THERMAL CHARACTERISTICS

Characteristics	Symbol	Max.	Unit
Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	35	$^0C/W$

ELECTRICAL CHARACTERISTICS ($T_A = 25^0C$ unless otherwise noted)

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

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ELECTRICAL CHARACTERISTICS (con't)

Characteristics		Symbol	Min.	Max.	Unit
ON CHARACTERISTICS (1)					
Forward-Current Transfer Ratio					
I_C = 200 mAdc, V_{CE} = 4.0 Vdc	2N1479, 2N1480	h_{FE}	20	60	
	2N1481, 2N1482		35	100	
Collector-Emitter Saturation Voltage					
I_C = 200 mAdc, I_B = 20 mAdc	2N1479, 2N1480	$V_{CE(sat)}$		0.75	
I_C = 200 mAdc, I_B = 10 mAdc	2N1481, 2N1482			0.75	Vdc
Base-Emitter Voltage					
I_C = 200 mAdc, V_{CE} = 4.0 Vdc		V_{BE}		1.5	Vdc
DYNAMIC CHARACTERISTICS					
Forward Current Cutoff Frequency					
I_C = 5.0 mAdc, V_{CB} = 28 Vdc		^{f}ab	800		kHz
SWITCHING CHARACTERISTICS					
Total Switching Time					
V_{CC} = 12 Vdc; R_C = 59 Ω; I_{B0} = I_{B2} = 8.5 mAdc; I_{B1}= 20 mAdc		$^{t}on + {}^{t}off$		25	µs

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