2N2880

NPN POWER TRANSISTORS - 1

Solitron Devices, Inc.

KEY FEATURES

- JAN/JANTX/JANTXV STANDARD PRODUCTS
- QUALIFIED PER MIL-PRF-19500/315
- LOW ON RESISTANCE, LOW SATURATION VOLTAGE, LOW LEAKAGE CURRENT & LOW DRIVE REQUIREMENT
- HIGH FREQUENCY RESPONSE & FAST SWITCHING
- HIGH OFF ISOLATION
- HIGH CURRENT GAIN & SAFE OPERATING AREAS
- SECOND SOURCE FOR MICROSEMI
- DESIGNED FOR USE IN HIGH VOLTAGE INVERTERS, CONVERTERS, SWITCHING REGULATORS AND LINE OPERATED AMPLIFIERS

Part Number	Package	19500/	Emitter/Base Voltage	Collector Current
2N2880	TO-59	315	80V/110V	5A

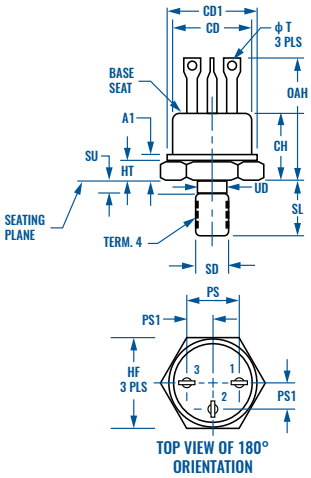
ABSOLUTE MAXIMUM RATINGS

Emitter-Base Voltage	8V	Storage Temperature	-65 to 200°C
Base Current	500mA	Operating Temperature	-65 to 200°C
Lead Temperature (1/16 from case, 10 sec)	300°C	Power Dissipation Derating	2W @ 25°C T_A 30W @ 75°C T_C 11.4mW/°C for T_A > 25°C 300mW/°C for T_C > 75°C

ORDERING GUIDE

JAN2N2880 JANTX2N2880 JANTXV2N2880

TO-59 PACKAGE OUTLINE & PIN CONNECTIONS



Ltr	Dimensions			
	Inches		mm	
	Min.	Max.	Min.	Max.
A1	0.090	0.150	2.29	3.81
CD	0.318	0.380	8.08	9.65
CD1	0.380	0.437	9.65	11.10
CH	0.320	0.468	8.13	11.89
HF	0.423	0.438	10.74	11.13
HT		0.250		6.35
OAH	0.570	0.763	14.48	19.38
PS	0.185	0.215	4.70	5.46
PS1	0.090	0.110	2.29	2.79
SD	0.190-32UNF-2A			
SL	0.400	0.455	10.16	11.56
SU		0.078		1.98
ϕT	0.040	0.065	1.02	1.65
UD	0.155	0.189	3.94	4.80

ELECTRICAL SPECIFICATIONS

Typical @ 25°C unless otherwise noted

Parameter	Symbol	Min.	Max.	Unit
Collector-Emitter Breakdown Voltage I_C = 100mAdc	$V_{(BR)CEO}$	80		Vdc
Collector-Base Breakdown Voltage I_C = 10µAdc	$V_{(BR)CBO}$	110		Vdc
Emitter-Base Breakdown Voltage I_C = 10µAdc	$V_{(BR)EBO}$	8		Vdc
Collector-Emitter Cutoff Current V_{CE} = 110Vdc, V_{BE} = -0.5Vdc	I_{CEX}		1.0	µA
Collector-Emitter Cutoff Current V_{CE} = 60Vdc	I_{CEO}		20	µA
Emitter-Base Cutoff Current V_{EB} = 6Vdc	I_{EBO}		0.2	µA
Forward-Current Transfer Ratio I_C = 50mAdc, V_{CE} = 5.0Vdc I_C = 1.0Adc, V_{CE} = 2.0Vdc I_C = 5.0Adc, V_{CE} = 5.0Vdc	h_{FE}	40 40 15	120 120	
Thermal Resistance	$R_{\theta JC}$		3.33	°C/W
Base-Emitter Saturated Voltage I_B = 0.1Adc, I_C = 1.0Adc	$V_{BE(sat)}$		1.2	Vdc
Collector-Emitter Saturated Voltage I_B = 0.1Adc, I_C = 1.0Adc I_B = 0.5Adc, I_C = 5.0Adc	$V_{CE(sat)}$		0.25 1.5	Vdc Vdc
Small-Signal Short-Circuit Forward Current Transfer Ratio I_C = 1Adc, V_{CE} = 10Vdc, f = 10MHz	$\|h_{fe}\|$	3	12	
Forward Current Transfer Ratio I_C = 50mAdc, V_{CE} = 5Vdc, f = 1kHz	h_{fe}	40	140	
Output Capacitance V_{CB} = 10Vdc, I_E = 0Adc, 100kHz ≤ f ≤ 1.0MHz	C_{obo}		150	pF
Pulse Rise Time	t_r		300	ns
Pulse Fall Time	t_f		300	ns

SAFE OPERATING AREA

DC Tests (continuous) - T_C = +100°C; t = 10s (See MIL-PRF-19500/315)
Test 1 - V_{CE} = 80Vdc, I_C = 80mAdc
Test 2 - V_{CE} = 20Vdc, I_C = 1.5Adc

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