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2N2876

SILICON N-P-N PLANAR TRANSISTOR

Maximum Ratings, *Absolute-Maximum Values:*

COLLECTOR-TO-BASE VOLTAGE, V_{CBO} . . . 80

COLLECTOR-TO-EMITTER VOLTAGE:
With base open, V_{CEO} . . . 60
With V_{BE} = -1.5 volts, V_{CEV} . . . 80

EMITTER-TO-BASE VOLTAGE, V_{EBO} . . . 4

COLLECTOR CURRENT, I_C . . . 2.5

TRANSISTOR DISSIPATION, P_T:
At case temperatures up to 25°C . . . 17.5
above 25°C . . . Derate linearly 100mw/°C

TEMPERATURE RANGE:
Storage . . . . . -65 to +200 -65 to +200 °C
Operating (Junction) . . . -65 to +200 -65 to +200 °C

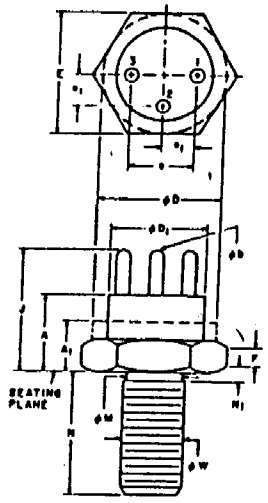
LEAD TEMPERATURE (During soldering):
At distances ≥ 1/32" from ceramic wafer for 10 sec. max. . . . 230 max. °C
At distances ≥ 1/32" from seating surface for 10 sec. max. . . . 230 max. °C

ELECTRICAL CHARACTERISTICS *Case Temperature = 25° C Unless Otherwise Specified*

Characteristic	Symbol	TEST CONDITIONS						LIMITS		Units
		DC Collector Volts		DC Base Volts	DC Current (Milliamperes)			2N2876		
		V_{CB}	V_{CC}	V_{BE}	I_E	I_B	I_C	Min.	Max.	
Collector-Cutoff Current	I_{CBO}	30			0			-	0.1	μa
Collector-to-Base Breakdown Voltage	BV_{CBO}				0		0.5	80	-	volts
Collector-to-Emitter Breakdown Voltage (Sustaining)	$BV_{CEO(sus)}$					0	500*	60	-	volts
Collector-to-Emitter Breakdown Voltage	BV_{CEV}			-1.5			0.1	80	-	volts
Emitter-to-Base Breakdown Voltage	BV_{EBO}				0.1		0	4	-	volts
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$					300	1.5 amp	-	-	volt
						500	2.5 amp	-	1	volt
Feedback Capacitance (Measured at 140 Kc)	$C_{b'c}$	30			0			-	20	pf
RF Power Output, Unneutralized	P_{out}									
Measured at 50 Mc			28				500	10[a]	-	watts
50 Mc			28				375	-	-	watts
150 Mc			28				275	3[b]	-	watts
Gain-Bandwidth Product	f_T		28				250	200 (typ.)		Mc
Base Spreading Resistance (Measured at 400 Mc)	$r_{bb'}$		28				250	6.0 (typ.)		ohms
Collector-to-Case Capacitance	C_c							-	6	pf

* Pulsed. Pulse duration ≤ 5 μsec; duty factor ≤ 1%.
[a] For P_{IN} = 2 watts.
[b] For P_{IN} = 1 watt.

TO-60



SYMBOL	INCHES MIN.	INCHES MAX.	MILLIMETERS MIN.	MILLIMETERS MAX.	NOTES
A	0.219	0.329	5.48	8.13	
A_1	-	0.165	-	4.19	2
øb	0.030	0.046	0.762	1.17	4
øD	0.390	0.437	9.14	11.10	2
$øD_1$	0.329	0.380	8.13	9.14	
E	0.424	0.437	10.77	11.10	
e	0.188	0.218	4.78	5.48	
e_1	0.090	0.110	2.29	2.79	
F	0.090	0.138	2.29	3.43	1
J	0.396	0.480	9.82	12.19	
øM	0.163	0.189	4.14	4.80	
N	0.378	0.488	9.83	11.96	
N_1	-	0.078	-	1.98	
øW	0.1498	0.1697	4.212	4.310	3, 5

MILLIMETER DIMENSIONS ARE DERIVED FROM ORIGINAL INCH DIMENSIONS

NOTES:

1. Dimension does not include sealing flanges
2. Package contour optional within dimensions specified
3. Pitch diameter — 10-32 UNF 2A thread (coated)
4. Pin spacing permits insertion in any socket having a pin-circle diameter of 0.200 in. (5.08 mm) and contacts which will accommodate pins with a diameter of 0.030 in. (0.762 mm) min., 0.046 in. (1.17mm) max.
5. The torque applied to a 10-32 hex nut assembled on the thread during installation should not exceed 12 inch-pounds.