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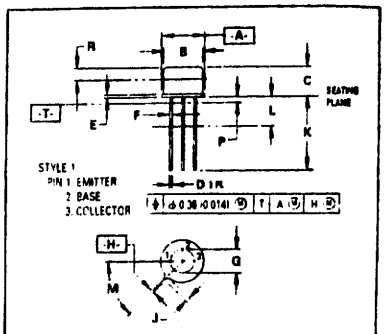
2N4271

SMALL SIGNAL NPN TRANSISTOR

MAXIMUM RATINGS

Rating	Symbol		Unit
Collector-Emitter Voltage	V_{CEO}	140	Vdc
Collector-Base Voltage	V_{CBO}	175	Vdc
Emitter-Base Voltage	V_{EBO}	8	Vdc
Base Current	I_B	500	Adc
Collector Current — Continuous	I_C	1.0	Adc
Continuous Power Dissipation at or Below T_C = 25°C Linear Derating Factor	P_D	5.0 28.6	Watts mW/°C
Continuous Power Dissipation at or Below T_A = 25°C Linear Derating Factor	P_D	1.0 5.72	Watts mW/°C
Operating and Storage Junction Temperature Range	T_J, T_{stg}	−65 to +200	°C
Lead Temperature 1/16" from Case for 10 Seconds	T_L	230	°C



DIM	MILLIMETERS MIN	MILLIMETERS MAX	INCHES MIN	INCHES MAX
A	8.51	9.39	0.335	0.370
B	7.75	8.50	0.305	0.335
C	6.10	6.60	0.240	0.260
D	0.41	0.53	0.016	0.021
E	2.23	1.34	0.009	0.041
F	0.41	0.48	0.016	0.019
G	5.08 BSC		0.200 BSC	
H	0.72	0.86	0.028	0.034
J	0.74	1.14	0.029	0.045
K	12.70	19.05	0.500	0.750
L	6.35	—	0.250	—
M	45° BSC		45° BSC	
P	—	1.27	—	0.050
R	2.54	—	0.100	—

CASE 79-04
TO-205AD
(TO-39)

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted.)

Characteristic	Symbol	Min	Max	Unit
OFF CHARACTERISTICS				
Collector-Emitter Breakdown Voltage (I_C = 1.0 mAdc)	$V_{(BR)CEO}$	140	—	Vdc
Collector Cutoff Current (V_{CB} 30 Vdc)	I_{CBO}	—	50	nAdc
Emitter Cutoff Current (V_{EB} = 8 Vdc)	I_{EBO}	—	100	nAdc
ON CHARACTERISTICS				
DC Current Gain (I_C = 0 .75a dc, V_{CE} 10 Vdc) (I_C = 200ma dc, V_{CE} = 10 Vdc) (I_C = .1 Adc, V_{CE} = 10 Vdc)	h_{FE}	15 20 — 10	— 140 —	—
Collector-Emitter Saturation Voltage (I_C = .750 Adc, I_B = 250 mAdc)	$V_{CE(sat)}$	—	3	Vdc
Base Emitter Saturation Voltage (I_C = 0.5 mAdc, V_{CE} = 3.0 Vdc)	VBE(sat)	0.55	.8	Vdc