

BSS71



MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	V _{CEO}	200	Vdc
Collector-Base Voltage	V _{CBO}	200	Vdc
Emitter-Base Voltage	V _{EBO}	6.0	Vdc
Collector Current - Continuous	I _C	0.5	Adc
Total Device Dissipation @ T _A = 25°C Derate above 25°C	P _D	0.5 2.86	Watts mW/°C
Total Device Dissipation @ T _C = 25°C Derate above 25°C	P _D	2.5 14.3	Watts mW/°C
Operating and Storage Junction Temperature Range	T _J , T _{stg}	-65 to +200	°C

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Case	R _{θJC}	70	°C/W

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

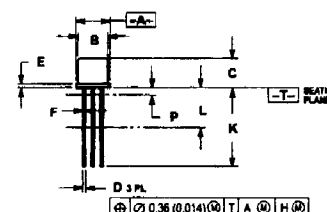
Characteristic	Symbol	Min	Typ	Max	Unit
OFF CHARACTERISTICS					
Collector-Emitter Breakdown Voltage (I _C = 10 mAdc, I _B = 0)(1)	V(BR)CEO	200	—	—	Vdc
Collector-Base Breakdown Voltage (I _C = 100 µAdc, I _E = 0)	V(BR)CBO	200	—	—	Vdc
Emitter-Base Breakdown Voltage (I _E = 100 µAdc, I _C = 0)	V(BR)EBO	6.0	—	—	Vdc
Collector Cutoff Current (V _{CB} = 150 Vdc, I _E = 0)	I _{CBO}	—	—	50	nAdc
Collector-Emitter Cutoff Current (V _{CE} = 150 Vdc, I _B = 0)	I _{CEO}	—	—	500	nAdc
Emitter Cutoff Current (V _{EB} = 5.0 Vdc, I _C = 0)	I _{EBO}	—	—	50	nAdc

ON CHARACTERISTICS

DC Current Gain (I _C = 0.1 mAdc, V _{CE} = 1.0 Vdc) (I _C = 1.0 mAdc, V _{CE} = 10 Vdc) (I _C = 10 mAdc, V _{CE} = 10 Vdc)(1) (I _C = 30 mAdc, V _{CE} = 10 Vdc)(1)	h _{FE}	20 30 50 40	40 45 120 140	— — — 250	—
Collector-Emitter Saturation Voltage(1) (I _C = 10 mAdc, I _B = 1.0 mAdc) (I _C = 30 mAdc, I _B = 3.0 mAdc) (I _C = 50 mAdc, I _B = 5.0 mAdc)	V _{CE(sat)}	—	0.15 0.25 0.35	0.3 0.4 0.5	Vdc
Base-Emitter Saturation Voltage(1) (I _C = 10 mAdc, I _B = 1.0 mAdc) (I _C = 30 mAdc, I _B = 3.0 mAdc) (I _C = 50 mAdc, I _B = 5.0 mAdc)	V _{BE(sat)}	—	0.7 0.8 0.85	0.8 0.9 1.0	Vdc

Pulse Test: Pulse Width ≤ 300 µs, Duty Cycle ≤ 2.0%.

Characteristic	Symbol	Min	Typ	Max	Unit
DYNAMIC CHARACTERISTICS					
Current-Gain - Bandwidth Product (I _C = 20 mAdc, V _{CE} = 20 Vdc, f = 20 MHz)	f _t	50	70	200	MHz
Output Capacitance (I _E = 0, V _{CB} = 20 Vdc, f = 1.0 MHz)	C _{ob}	—	3.5	—	pF
Input Capacitance (I _C = 0, V _{EB} = 0.5 Vdc, f = 1.0 MHz)	C _{ib}	—	45	—	pF
Turn-On Time (I _{B1} = 10 mAdc, I _C = 50 mAdc, V _{CC} = 100 Vdc)	t _{on}	—	100	—	ns
Turn-Off Time (I _{B2} = 10 mAdc, I _C = 50 mAdc, V _{CC} = 100 Vdc)	t _{off}	—	400	—	ns



- NOTES
1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M 1982
2. CONTROLLING DIMENSION: INCH
3. DIMENSION L MEASURED FROM DIMENSION A MAXIMUM
4. DIMENSION F APPLIES BETWEEN DIMENSION P AND L. DIMENSION D APPLIES BETWEEN DIMENSION L AND K MINIMUM LEAD DIAMETER IS UNCONTROLLED IN DIMENSION P AND BEYOND DIMENSION K MINIMUM
5. DIMENSION E INCLUDES THE TAB THICKNESS (TAB THICKNESS IS 0.010 (0.025) MAXIMUM)

	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.288	0.292	5.31	5.34
B	0.178	0.182	4.52	4.55
C	0.170	0.174	4.30	4.33
D	0.018	0.021	0.458	0.533
E	—	0.020	—	0.512
F	0.018	0.019	0.458	0.483
G	0.100 BSC	—	2.54 BSC	—
H	0.020	0.021	0.514	1.37
J	0.020	0.020	0.511	1.27
K	0.500	—	12.70	—
L	0.280	—	7.12	—
M	0.350 BSC	—	8.89 BSC	—
N	0.010 BSC	—	0.25 BSC	—
P	—	0.020	—	1.27

