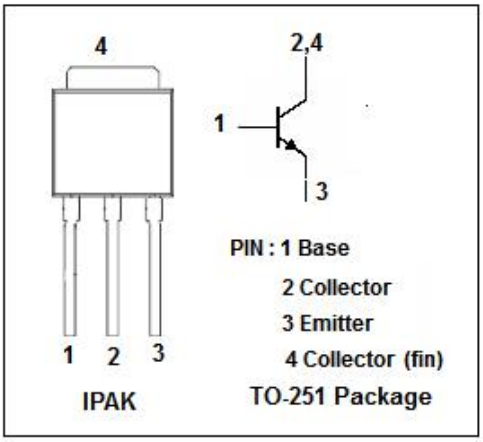
isc Silicon NPN Power Transistor — 2SD1899-Z

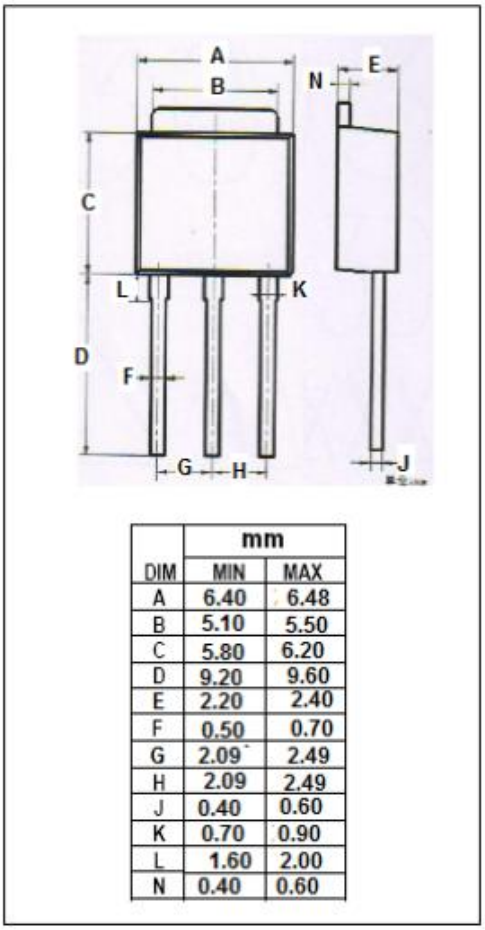


DESCRIPTION

- Low collector saturation voltage
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- High transition frequency applications



DIM	mm MIN	mm MAX
A	6.40	6.48
B	5.10	5.50
C	5.80	6.20
D	9.20	9.60
E	2.20	2.40
F	0.50	0.70
G	2.09	2.49
H	2.09	2.49
J	0.40	0.60
K	0.70	0.90
L	1.60	2.00
N	0.40	0.60

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	60	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	3	A
P_C	Collector Power Dissipation	1.0	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{CE(sat)}$NOTE	Collector-Emitter Saturation Voltage	I_C= 1.5A; I_B= 150mA			0.25	V
$V_{BE(sat)}$NOTE	Base-Emitter Saturation Voltage	I_C= 1.5A; I_B= 150mA			1.2	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 60V; I_E= 0			10	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 7V; I_C= 0			10	μA
h_{FE-1}NOTE	DC Current Gain	I_C= 0.2A; V_{CE}= 2V	60			
h_{FE-2}NOTE	DC Current Gain	I_C= 0.6A; V_{CE}= 2V	100		400	
h_{FE-3}NOTE	DC Current Gain	I_C= 2A; V_{CE}= 2V	50			
C_{OB}	Output Capacitance	I_E= 0; V_{CB}= 10V; f= 1.0MHz		30		pF
f_T	Current-Gain—Bandwidth Product	I_C= 1.5A; V_{CE}= 5V		120		MHz

NOTE:Pulse test PW≤350us,duty cycle ≤2%/pulse

◆ **h_{FE-2} Classifications**

M	L	K
100-200	160-320	200-400

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