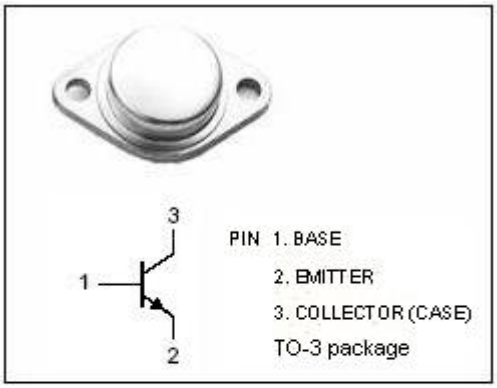
isc Silicon NPN Power Transistor — 2SD312

DESCRIPTION

- High Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$= 600V(Min)
- Fast Switching Speed
- Wide Area of Safe Operation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

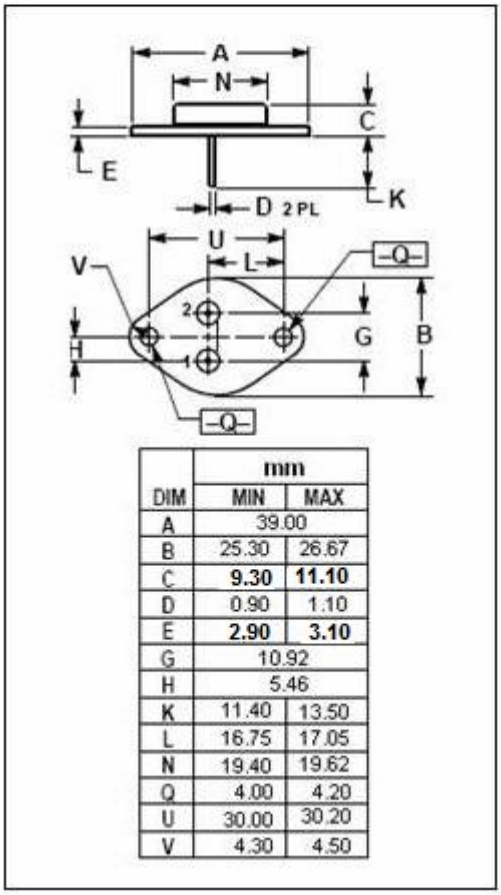


APPLICATIONS

- Switching regulator and high voltage switching applications
- High speed DC-DC converter applications.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	MAX	UNIT
V_{CBO}	Collector-Base Voltage	800	V
V_{CEO}	Collector-Emitter Voltage	600	V
V_{EBO}	Emitter-Base Voltage	7	V
I_C	Collector Current-Continuous	0.5	A
I_{CM}	Collector Current-Peak	1	A
P_C	Collector Power Dissipation @T_C=100℃	25	W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-65~150	℃



DIM	mm MIN	MAX
A	39.00	
B	25.30	26.67
C	**9.30**	**11.10**
D	0.90	1.10
E	**2.90**	**3.10**
G	10.92	
H	5.46	
K	11.40	13.50
L	16.75	17.05
N	19.40	19.62
Q	4.00	4.20
U	30.00	30.20
V	4.30	4.50

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ELECTRICAL CHARACTERISTICS

T_C=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	I_C= 5mA; R_{BE}= ∞	600			V
$V_{(BR)CBO}$	Collector-Base Breakdown Voltage	I_C= 1mA; I_E= 0	800			V
$V_{(BR)EBO}$	Emitter-Base Breakdown Voltage	I_E= 1mA; I_C= 0	7			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 0.5A; I_B= 0.1A			2.0	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 0.5A; I_B= 0.1A			1.5	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 800V; I_E= 0			100	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 5V; I_C= 0			10	μA
h_{FE-1}	DC Current Gain	I_C= 0.1A; V_{CE}= 5V	10		40	
h_{FE-2}	DC Current Gain	I_C= 0.5A; V_{CE}= 5V	6			
f_T	Current-Gain—Bandwidth Product	I_C= 0.1A; V_{CE}= 10V		5		MHz
C_{OB}	Output Capacitance	I_E= 0; V_{CB}= 10V		30		pF