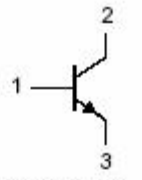
isc Silicon NPN Power Transistor — 2SD345

DESCRIPTION

- Collector-Emitter Breakdown Voltage-
  : $V_{(BR)CEO}$= 55V(Min)
- Low Collector-Emitter Saturation Voltage-
  : $V_{CE(sat)}$= 0.6V(Max) @I_C= 2.0A
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



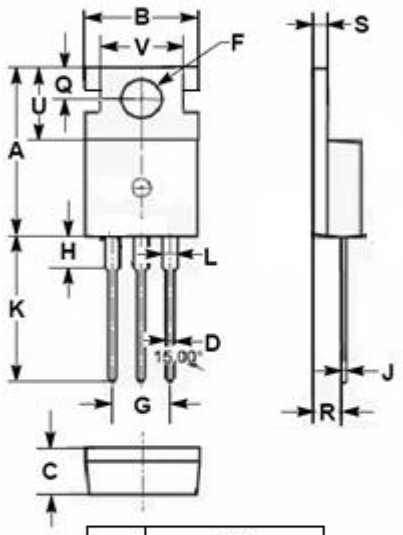
PIN 1. BASE
2.COLLECTOR
3. EMITTER
TO-220C package

APPLICATIONS

- Designed for audio and general purpose applications.

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	70	V
V_{CEO}	Collector-Emitter Voltage	55	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current-Continuous	3	A
I_{CM}	Collector Current-Peak	5	A
I_B	Base Current-Peak	1	A
P_C	Total Power Dissipation @ T_C=25℃	35	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature Range	-55~150	℃



DIM	mm MIN	mm MAX
A	15.50	15.90
B	9.80	10.20
C	4.20	4.50
D	0.70	0.90
F	3.40	3.70
G	4.98	5.18
H	2.68	2.90
J	0.44	0.60
K	12.80	13.40
L	1.20	1.45
Q	2.70	2.90
R	2.30	2.70
S	1.29	1.35
U	6.45	6.65
V	8.66	8.86

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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= 10mA; I_B= 0	55			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	I_C= 2A; I_B= 0.2A			0.6	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	I_C= 2A; I_B= 0.2A			1.0	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 70V; I_E= 0			100	μA
I_{EBO}	Emitter Cutoff Current	V_{EB}= 6V; I_C= 0			100	μA
h_{FE-1}	DC Current Gain	I_C= 0.1A; V_{CE}= 1V	60		320	
h_{FE-2}	DC Current Gain	I_C= 2A; V_{CE}= 1V	20			
f_T	Current-Gain—Bandwidth Product	I_E=0.5A; V_{CE}= 5V	5			MHz
C_{OB}	Output Capacitance	I_E= 0; V_{CB}= 10V; f_{test}= 1MHz		60		pF
Switching Times						
t_{on}	Turn-on Time	I_C= 2A; R_L= 10Ω, I_{B1}= -I_{B2}= 0.2A, V_{CC}= 20V			1.2	μs
t_{stg}	Storage Time				2.0	μs
t_f	Fall Time				1.1	μs