

isc Silicon NPN Power Transistor

2SD343

DESCRIPTION

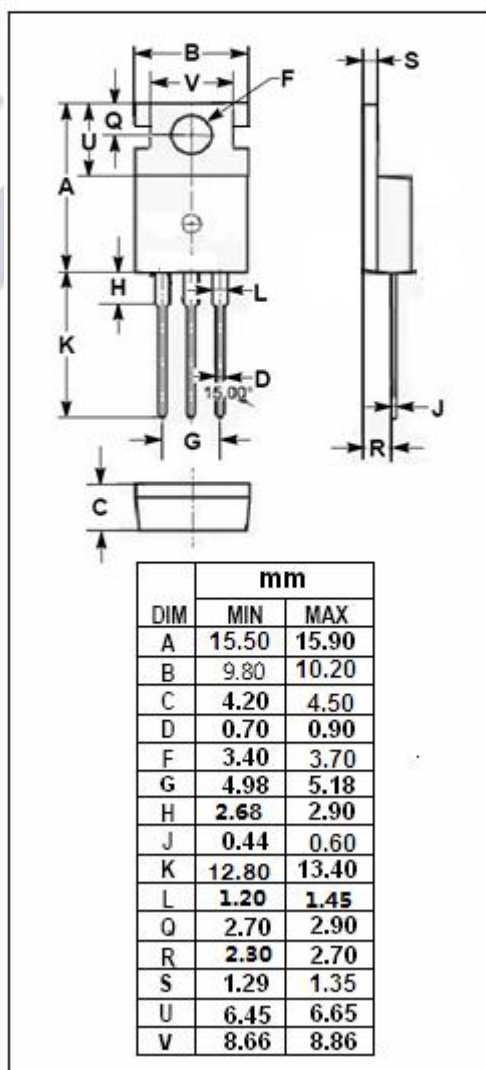
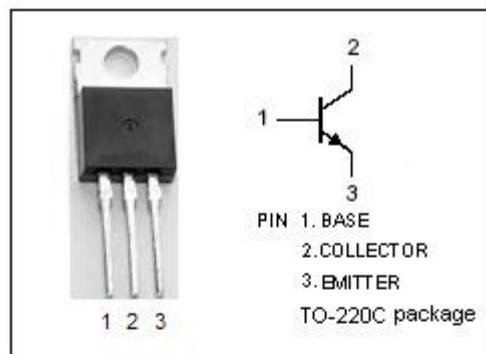
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 40V(\text{Min})$
- Low Collector-Emitter Saturation Voltage-
: $V_{CE(sat)} = 0.6V(\text{Max}) @ I_C = 2.0A$
- Fast Switching Speed
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for audio and general purpose applications.

ABSOLUTE MAXIMUM RATINGS($T_a = 25^\circ\text{C}$)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	70	V
V_{CEO}	Collector-Emitter Voltage	40	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 @ $T_C = 25^\circ\text{C}$	35	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



isc Silicon NPN Power Transistor**2SD343****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 10mA; I _B = 0	40			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	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 6V; I _C = 0			100	μ A
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 = 10 Ω , I _{B1} = -I _{B2} = 0.2A, V _{CC} = 20V			1.2	μ s
t _{stg}	Storage Time				2.0	μ s
t _f	Fall Time				1.1	μ s