

isc Silicon NPN Power Transistor**2SD743****DESCRIPTION**

- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 80V(\text{Min})$
- DC Current Gain-
: $h_{FE} = 40 \sim 200 @ I_C = 0.5A$
- Complement to Type 2SB703
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

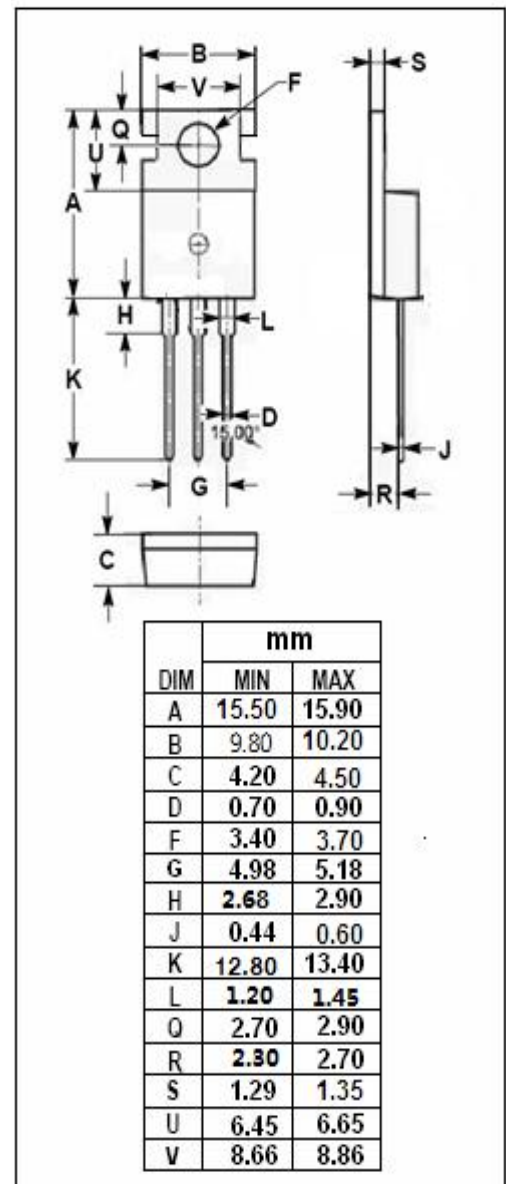
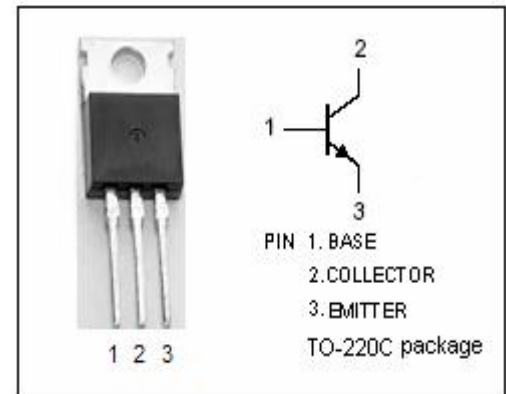
- Designed for use in audio frequency power amplifier, low speed switching applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	100	V
V_{CEO}	Collector-Emitter Voltage	80	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	4	A
I_{CM}	Collector Current-Peak	6	A
I_B	Base Current-Continuous	1	A
P_C	Collector Power Dissipation @ $T_C = 25^\circ\text{C}$	40	W
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th j-c}$	Thermal Resistance, Junction to Case	3.125	$^\circ\text{C/W}$



isc Silicon NPN Power Transistor**2SD743****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	80			V
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C = 1mA; I _E = 0	80			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 1mA; I _C = 0	5			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 3A; I _B = 0.3A			2.0	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 3A; I _B = 0.3A			2.0	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 80V; I _E = 0			10	μ A
I _{EBO}	Emitter Cutoff Current	V _{EB} = 3V; I _C = 0			10	μ A
h _{FE-1}	DC Current Gain	I _C = 20mA; V _{CE} = 5V	20			
h _{FE-2}	DC Current Gain	I _C = 0.5A; V _{CE} = 5V	40		200	
f _T	Current-Gain—Bandwidth Product	I _C = 0.1A; V _{CE} = 5V; f _{test} = 1.0MHz	10			MHz

◆ h_{FE-2} Classifications

S	R	Q
40-80	60-120	100-200

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