

isc Silicon NPN Power Transistor

2SD612

DESCRIPTION

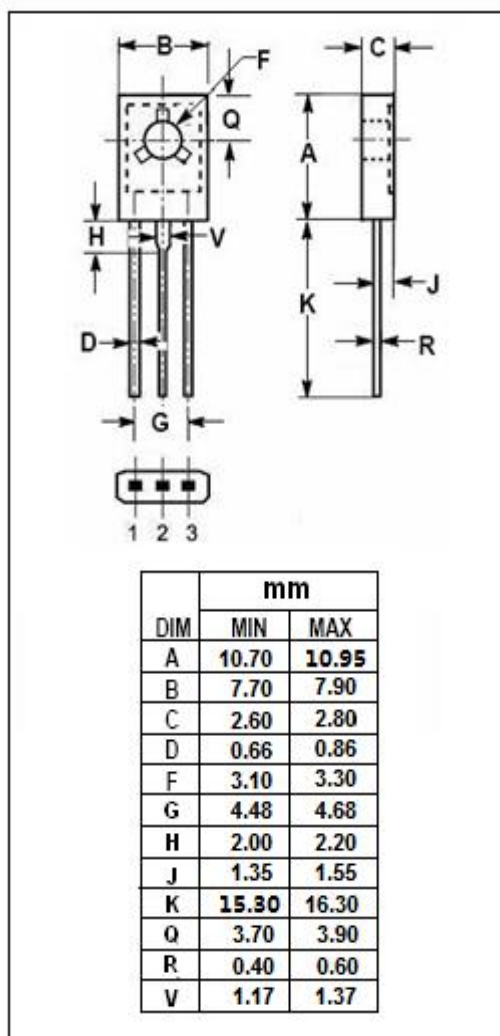
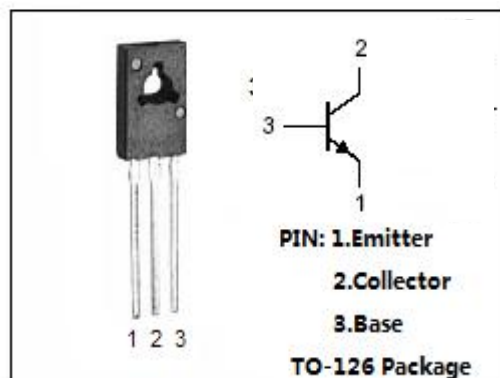
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 25V(\text{Min.})$
- High Collector Dissipation
- Wide Area of Safe Operation
- Complement to Type 2SB632
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for low frequency power amplifier applications.

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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	25	V
V_{CEO}	Collector-Emitter Voltage	25	V
V_{EBO}	Emitter-Base Voltage	5	V
I_C	Collector Current-Continuous	2	A
I_{CP}	Collector Current-Pulse	3	A
P_C	Collector Power Dissipation @ $T_C=25^\circ\text{C}$	10	W
	Collector Power Dissipation @ $T_a=25^\circ\text{C}$	1	
T_J	Junction Temperature	150	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~150	$^\circ\text{C}$



isc Silicon NPN Power Transistor**2SD612****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{(BR)CBO}	Collector-Base Breakdown Voltage	I _C = 10 μA ; I _E = 0	25			V
V _{(BR)CEO}	Collector-Emitter Breakdown Voltage	I _C = 1mA ; R _{BE} = ∞	25			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage	I _E = 10 μA ; I _C = 0	5			V
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 1.5A; I _B = 0.15A		0.3	0.8	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 1.5A; I _B = 0.15A		1.1	1.5	V
I _{CBO}	Collector Cutoff Current	V _{CB} = 20V; I _E = 0			1	μA
I _{EBO}	Emitter Cutoff Current	V _{EB} = 4V; I _C = 0			1	μA
h _{FE-1}	DC Current Gain	I _C = 0.5A; V _{CE} = 2V	60		320	
h _{FE-2}	DC Current Gain	I _C = 1.5A; V _{CE} = 2V	30			
f _T	Current-Gain—Bandwidth Product	I _C = 50mA; V _{CE} = 10V		100		MHz
C _{OB}	Output Capacitance	I _E = 0; V _{CB} = 10V, f _{test} = 1MHz		30		pF

Switching times

t _{on}	Turn-On Time	I _C = 0.5A, R _L =24 Ω, I _{B1} = I _{B2} = 50mA, V _{CE} = 12V		0.05		μs
t _f	Fall Time			0.1		μs
t _{stg}	Storage Time			0.4		μs

◆ h_{FE-1} Classifications

D	E	F
60-120	100-200	160-320

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