

isc Silicon NPN Transistor

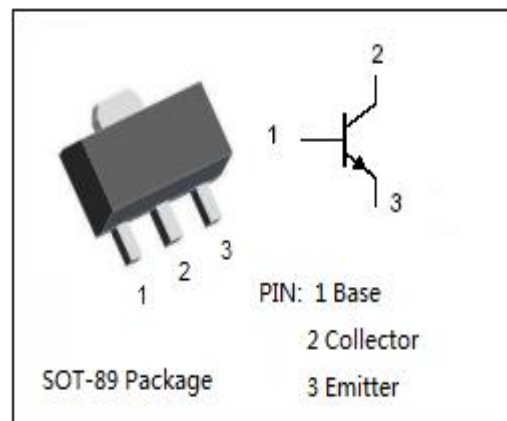
2SC1815

DESCRIPTION

- With SOT-89 packaging
- High Voltage and High Current
 $V_{ce0}=50V(\text{Min.})$, $I_c=150mA(\text{Max})$
- Excellent hFE Linearity
- Low Noise
- Complement to Type 2SA1015(O,Y,GR class)

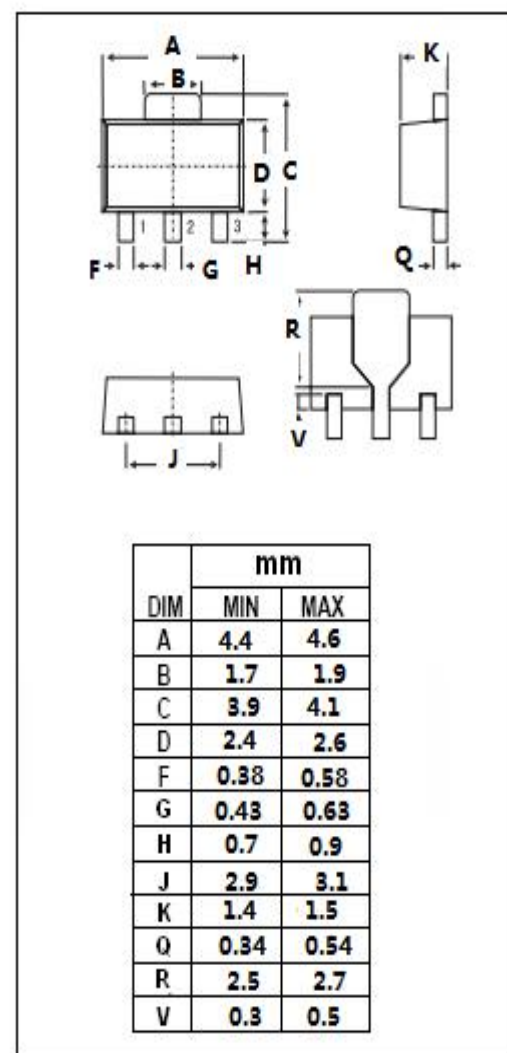
APPLICATIONS

- Audio frequency general purpose amplifier Applications
- Driver stage amplifier applications.



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

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	60	V
V_{CEO}	Collector-Emitter Voltage	50	V
V_{EBO}	Emitter-Base Voltage	5	V
I_c	Collector Current	150	mA
I_B	Base Current	50	mA
P_C	Collector Power Dissipation @ $T_c=25^\circ\text{C}$	400	mW
T_J	Junction Temperature	125	$^\circ\text{C}$
T_{stg}	Storage Temperature Range	-55~125	$^\circ\text{C}$



isc Silicon NPN Transistor**2SC1815****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V _{CE(sat)}	Collector-Emitter Saturation Voltage	I _C = 100mA ; I _B = 10mA			0.25	V
V _{BE(sat)}	Base-Emitter Saturation Voltage	I _C = 100mA ; I _B = 10mA			1.0	V
I _{CBO}	Emitter Cutoff Current	V _{CB} = 60V; I _E = 0			0.1	μ A
I _{EBO}	Collector Cutoff Current	V _{EB} = 5V; I _C = 0			0.1	μ A
h _{FE(1)}	DC Current Gain	I _C = 2mA ; V _{CE} = 6V	70		700	
h _{FE(2)}	DC Current Gain	I _C = 150mA ; V _{CE} = 6V	25			
f _T	Current-Gain—Bandwidth Product	I _C = 1mA; V _{CE} = 10V;	80			MHz
C _{ob}	Collector Output Capacitance	V _{CB} =10V; I _E =0; f=1MHz			3.5	pF
R _{bb'}	Base Intrinsic Resistance	V _{CE} =10V, I _E =-1mA; f=30MHz		50		Ω
NF	Noise Figure	V _{CE} =6V, I _C =0.1mA; f=1KHz, R _G =10K Ω			10	dB

◆ **h_{FE(1)} Classifications**

O	Y	GR	BL
70-140	120-400	200-400	350-700