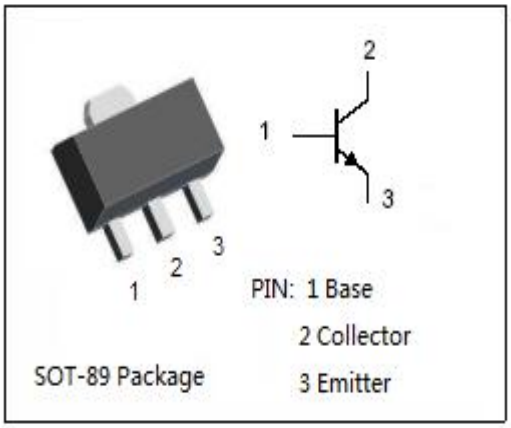
isc Silicon NPN Transistor 2SC1815

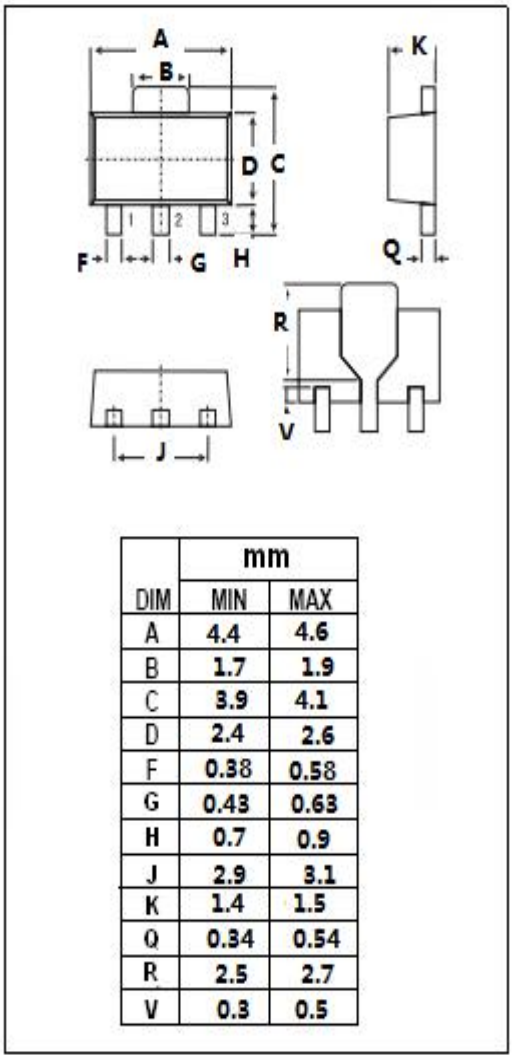
DESCRIPTION

- With SOT-89 packaging
- High Voltage and High Current
  Vceo=50V(Min.)，Ic=150mA(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.



DIM	mm MIN	mm MAX
A	4.4	4.6
B	1.7	1.9
C	3.9	4.1
D	2.4	2.6
F	0.38	0.58
G	0.43	0.63
H	0.7	0.9
J	2.9	3.1
K	1.4	1.5
Q	0.34	0.54
R	2.5	2.7
V	0.3	0.5

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

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 Curren	150	mA
I_B	Base Curren	50	mA
P_C	Collector Power Dissipation @T_C=25℃	400	mW
T_J	Junction Temperature	125	℃
T_{stg}	Storage Temperature Range	-55~125	℃

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ELECTRICAL CHARACTERISTICS

T_C=25℃ 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	μA
I_{EBO}	Collector Cutoff Current	V_{EB}= 5V; I_C= 0			0.1	μA
$h_{FE(1)}$	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
Cob	Collector Output Capacitance	V_{CB}=10V; I_E=0; f=1MHz			3.5	pF
Rbb'	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=10KΩ			10	dB

◆ **$h_{FE(1)}$ Classifications**

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