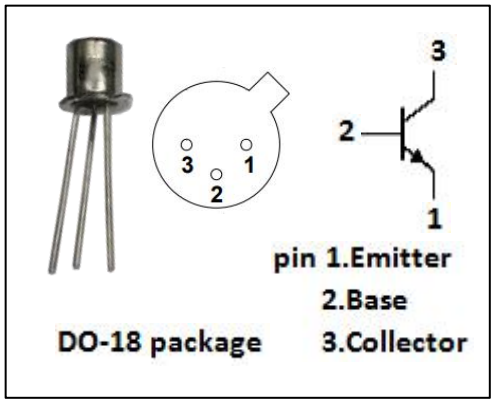
isc General Purpose NPN Small Signal Transistor BC109

DESCRIPTION

- With TO-18 package.
- High DC Current Gain-
  : h_{FE}:200-800@ (V_{CE}= 5V, I_C= 2mA)
- Minimum Lot-to-Lot variations for robust device performance and reliable operation



APPLICATIONS

- Designed For Low Noise General Purpose Amplifiers, Driver Stages and Signal Processing Applications

ABSOLUTE MAXIMUM RATINGS(T_a=25℃)

SYMBOL	PARAMETER	VALUE	UNIT
V_{CBO}	Collector-Base Voltage	30	V
V_{CEO}	Collector-Emitter Voltage	25	V
V_{EBO}	Emitter-Base Voltage	5.0	V
I_C	Collector Current-Continuous	100mA	A
P_T	Total Power Dissipation @T_A=25℃	300	mW
T_J	Junction Temperature	-55~175	℃
T_{stg}	Storage Temperature	-55~175	℃

• THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j\text{-}a}$	Thermal Resistance, Junction to Ambient	500	℃/W

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ELECTRICAL CHARACTERISTICS

Tj=25℃ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
$V_{CEO(SUS)}$	Collector-Emitter Sustaining Voltage	I_C=2mA, Ib=0	25		V
$V_{CE(sat)-1}$	Collector-Emitter Saturation Voltage	I_C= 10mA; I_B= 0.5mA		0.25	V
$V_{CE(sat)-2}$	Collector-Emitter Saturation Voltage	I_C= 100mA; I_B= 5mA		0.60	V
$V_{BE(sat)-1}$	Base-Emitter Saturation Voltage	I_C= 10mA; I_B= 0.5mA		0.83	V
$V_{BE(sat)-2}$	Base-Emitter Saturation Voltage	I_C= 100mA; I_B= 5mA		1.05	V
$V_{BE(on)-1}$	Base-Emitter On Voltage	I_C= 2mA ; V_{CE}= 5V	0.55	0.70	V
$V_{BE(on)-2}$	Base-Emitter On Voltage	I_C= 10mA ; V_{CE}= 5V		0.77	V
I_{CBO}	Collector Cutoff Current	V_{CB}= 45V; I_E= 0		15	nA
h_{FE}	DC Current Gain	I_C= 2mA; V_{CE}= 5V	200	800	