

# isc Silicon NPN Power Transistor

## 2SC4116

### DESCRIPTION

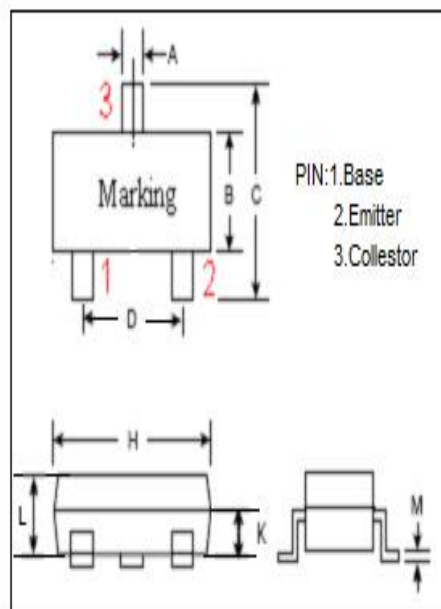
- With SOT-323 packaging
- High collector-base voltage
- High power dissipation
- Low saturation voltage
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

- Power amplifier applications

### ABSOLUTE MAXIMUM RATINGS(Ta=25°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-Continuous	0.15	A
$P_C$	Collector Power Dissipation @ $T_C=25^{\circ}C$	0.1	W
$T_J$	Junction Temperature	150	°C
$T_{stg}$	Storage Temperature Range	-55~150	°C



DIM	MIN (mm)	MAX (mm)
A	0.20	0.40
B	1.24	1.32
C	2.06	2.21
D	1.26	1.34
H	2.08	2.16
K	0.51	0.56
L	0.80	0.90
M	0.10	0.25

**isc Silicon NPN Power Transistor****2SC4116****ELECTRICAL CHARACTERISTICS** $T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
$BV_{CBO}$	Collector-Base Breakdown Voltage	$I_C = 0.1\text{mA}$ ; $I_E = 0$	60			V
$BV_{CEO}$	Collector-Emitter Breakdown Voltage	$I_C = 1\text{mA}$ ; $I_B = 0$	50			V
$BV_{EBO}$	Emitter-Base Breakdown Voltage	$I_E = 0.1\text{mA}$ ; $I_C = 0$	5			V
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = 0.1\text{A}$ ; $I_B = 0.01\text{A}$			0.25	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = 0.1\text{A}$ ; $I_B = 0.01\text{A}$			0.25	V
$I_{CBO}$	Collector Cutoff Current	$V_{CB} = 60\text{V}$ ; $I_E = 0$			0.1	$\mu\text{A}$
$I_{EBO}$	Emitter Cutoff Current	$V_{EB} = 5\text{V}$ ; $I_C = 0$			0.1	$\mu\text{A}$
$h_{FE}$	DC Current Gain	$I_C = 2\text{mA}$ ; $V_{CE} = 6\text{V}$	70		700	

**Classification of  $h_{FE}$** 

Rank	O	Y	GR	BL
Range	70-140	120-240	200-400	350-700

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