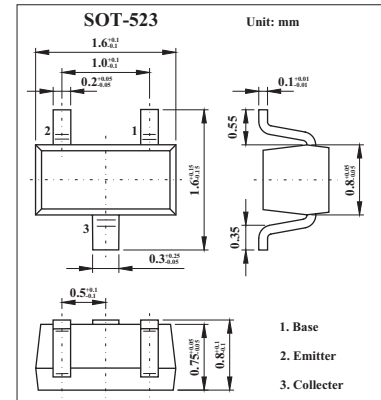


## Silicon NPN Epitaxial Planar type

## 2SC4738

## ■ Features

- High voltage and high current:  $V_{CE}=50V, I_C=150mA(\text{Max.})$
- Excellent  $h_{FE}$  linearity :  $h_{FE}(I_C=0.1mA)/h_{FE}(I_C=2mA)=0.95(\text{Typ.})$
- High  $h_{FE}$ : =120 to 700

■ Absolute Maximum Ratings  $T_a = 25^\circ\text{C}$ 

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CBO}$	60	V
Collector-emitter voltage	$V_{CEO}$	50	V
Emitter-base voltage	$V_{EBO}$	5	V
Collector current	$I_C$	150	mA
Base current	$I_B$	30	mA
Collector power dissipation	$P_C$	100	mW
Junction temperature	$T_j$	125	$^\circ\text{C}$
Storage temperature range	$T_{stg}$	-55 to +125	$^\circ\text{C}$

■ Electrical Characteristics  $T_a = 25^\circ\text{C}$ 

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector cut-off current	$I_{CBO}$	$V_{CB}=60V, I_E=0$			0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=5V, I_C=0$			0.1	$\mu\text{A}$
DC current gain	$h_{FE}$	$V_{CE}=6V, I_C=2mA$	120		700	
Collector emitter saturation voltage	$V_{CE(sat)}$	$I_C=100mA, I_B=10mA$		0.1	0.25	V
Collector output capacitance	$c_{ob}$	$V_{CB}=10V, I_E=0, f=1MHz$		2.0	3.5	pF
Transition frequency	$f_T$	$V_{CE}=10V, I_C=1mA$	80			MHz

■  $h_{FE}$  Classification

Marking	LY	LGR	LBL
Rank	Y	GR	BL
$h_{FE}$	120~240	200~400	350~700