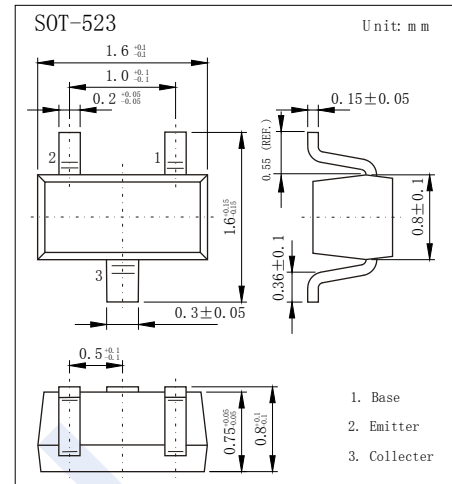


NPN Transistors

2SC4738

■ Features

- High Voltage and Current
- High DC Current Gain
- Small Package
- Complementary to 2SA1832

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

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CB0}	60	V
Collector - Emitter Voltage	V_{CE0}	50	
Emitter - Base Voltage	V_{EB0}	5	
Collector Current - Continuous	I_C	150	mA
Collector Power Dissipation	P_C	100	mW
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	1250	$^\circ\text{C}/\text{W}$
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	-55 to 150	

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V_{CB0}	$I_C = 100\ \mu\text{A}, I_E = 0$	60			V
Collector-emitter breakdown voltage	V_{CE0}	$I_C = 1\ \text{mA}, I_B = 0$	50			
Emitter-base breakdown voltage	V_{EB0}	$I_E = 100\ \mu\text{A}, I_C = 0$	5			
Collector-base cut-off current	I_{CB0}	$V_{CB} = 60\text{V}, I_E = 0$			0.1	μA
Emitter cut-off current	I_{EB0}	$V_{EB} = 5\text{V}, I_C = 0$			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 100\text{mA}, I_B = 10\text{mA}$			0.25	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 100\text{mA}, I_B = 10\text{mA}$			1.2	
DC current gain	h_{FE}	$V_{CE} = 6\text{V}, I_C = 2\text{mA}$	120		700	
Collector output capacitance	C_{ob}	$V_{CB} = 10\text{V}, I_E = 0, f = 1\text{MHz}$			3.5	pF
Transition frequency	f_T	$V_{CE} = 10\text{V}, I_C = 1\text{mA}$	80			MHz

■ Classification of h_{FE}

Type	2SC4738-Y	2SC4738-G	2SC4738-BL
Range	120-240	200-400	350-700
Marking	LY	LG	LL

NPN Transistors

2SC4738

■ Typical Characteristics

