

RoHS Compliant Product  
A suffix of "-C" specifies halogen & lead-free

## FEATURES

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

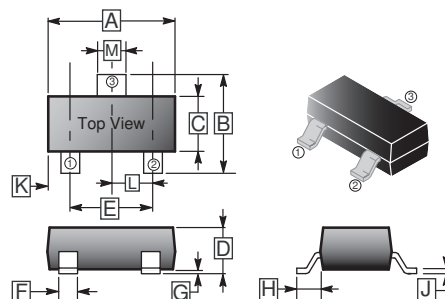
## CLASSIFICATION OF $h_{FE}$

Product-Rank	2SC4738-Y	2SC4738-GR	2SC4738-BL
Range	120~240	200~400	350~700
Marking	LY	LG	LL

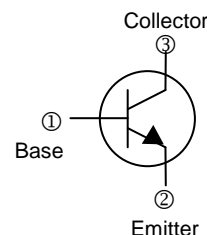
## PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-523	3K	7 inch

## SOT-523



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.5	1.7	G	-	0.1
B	1.45	1.75	H	0.55 REF.	
C	0.75	0.85	J	0.1	0.2
D	0.7	0.9	K	-	
E	0.9	1.1	L	0.5 TYP.	
F	0.15	0.25	M	0.25	0.325



## ABSOLUTE MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Ratings	Unit
Collector to Base Voltage	$V_{CBO}$	60	V
Collector to Emitter Voltage	$V_{CEO}$	50	V
Emitter to Base Voltage	$V_{EBO}$	5	V
Collector Current - Continuous	$I_C$	150	mA
Collector Power Dissipation	$P_C$	100	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	1250	$^\circ\text{C} / \text{W}$
Junction and Storage Temperature	$T_J, T_{STG}$	150, -55~150	$^\circ\text{C}$

## ELECTRICAL CHARACTERISTICS ( $T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Collector to Base Breakdown Voltage	$V_{(BR)CBO}$	60	-	-	V	$I_C=100\mu\text{A}, I_E=0$
Collector to Emitter Breakdown Voltage	$V_{(BR)CEO}$	50	-	-	V	$I_C=1\text{mA}, I_B=0$
Emitter to Base Breakdown Voltage	$V_{(BR)EBO}$	5	-	-	V	$I_E=100\mu\text{A}, I_C=0$
Collector Cut - off Current	$I_{CBO}$	-	-	100	nA	$V_{CB}=60\text{V}, I_E=0$
Emitter Cut - off Current	$I_{EBO}$	-	-	100	nA	$V_{EB}=5\text{V}, I_C=0$
DC Current Gain	$h_{FE}$	120	-	700		$V_{CE}=6\text{V}, I_C=2\text{mA}$
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	-	-	0.25	V	$I_C=100\text{mA}, I_B=10\text{mA}$
Transition Frequency	$f_T$	80	-	-	MHz	$V_{CE}=10\text{V}, I_C=1\text{mA}$
Collector Output Capacitance	$C_{ob}$	-	-	3.5	pF	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$

**CHARACTERISTICS CURVE**

