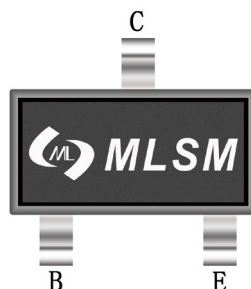


Features

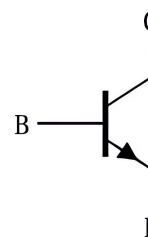
- High Voltage and Current
- High DC Current Gain
- Complementary to 2SA1832
- Small Package

Applications

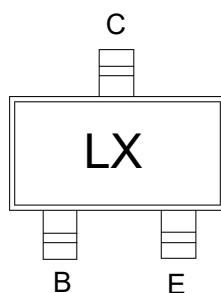
- General Purpose Amplification



SOT-523 top view



Schematic diagram



Marking and pin assignment

X:Rank



Pb-Free

RoHS



Halogen-Free

Maximum Ratings (Ta=25°C unless otherwise noted)

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	150	mA
P_C	Collector Power Dissipation	100	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	1250	°C/W
T_J, T_{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

Ordering Information (Example)

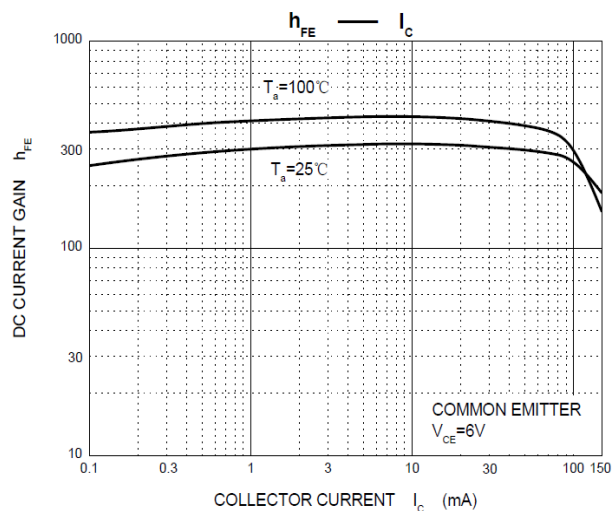
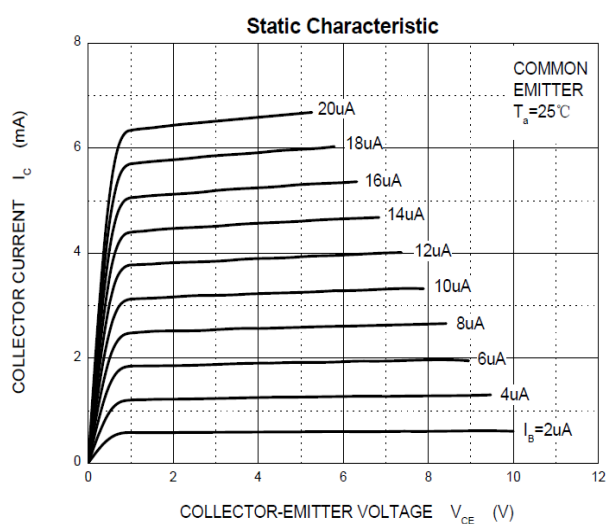
Type	Package	Marking	Minimum Package(pcs)	Inner Box Quantity(pcs)	Outer Carton Quantity(pcs)	Delivery Mode
2SC4738	SOT-523	LY/LG/LL	3,000	45,000	180,000	7" reel

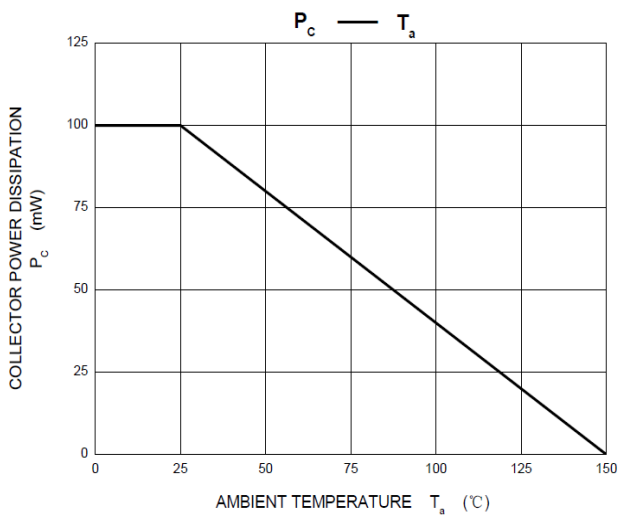
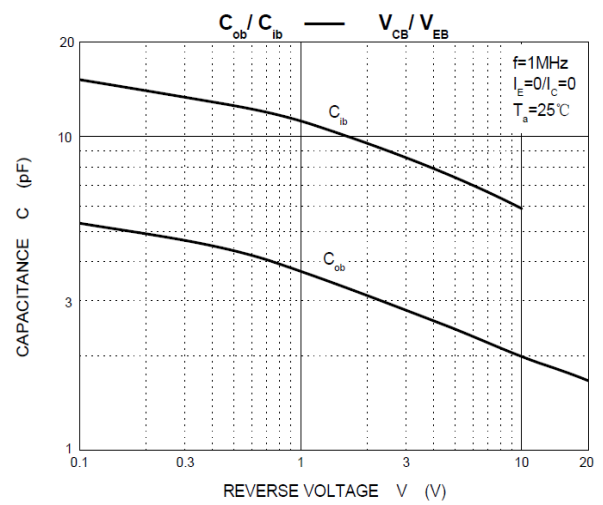
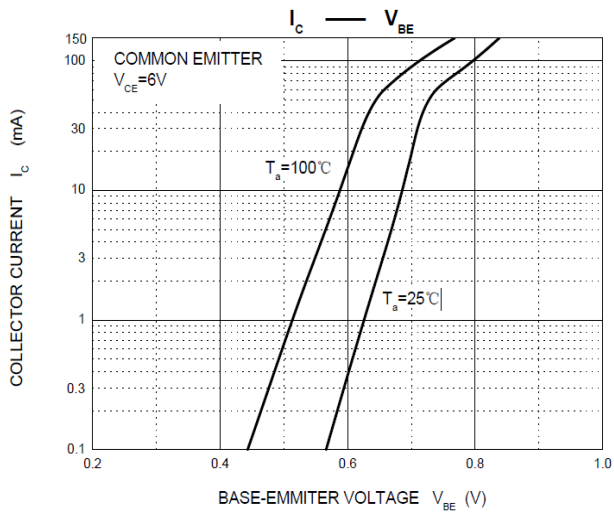
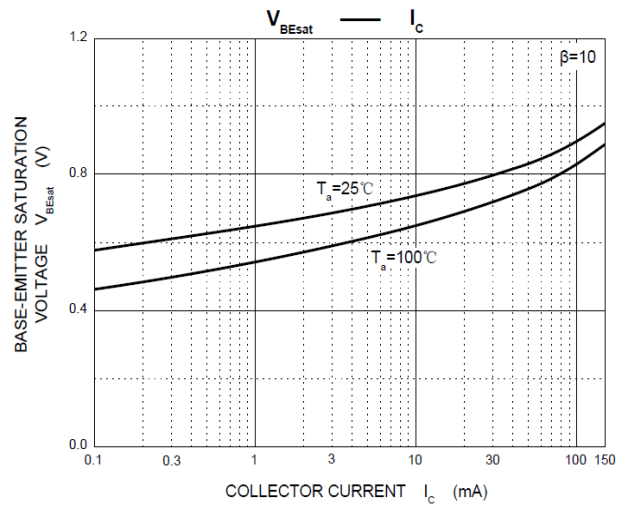
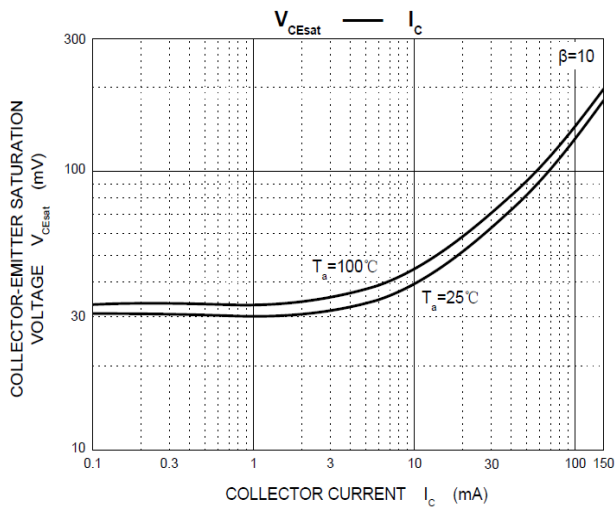
Electrical Characteristics (Ta=25°C unless otherwise specified)

Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C=100\mu A, I_E=0$	60	--	--	V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C=1mA, I_B=0$	50	--	--	V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E=100\mu A, I_C=0$	5	--	--	V
I_{CBO}	Collector cut-off current	$V_{CB}=60V, I_E=0$	--	--	100	nA
I_{EBO}	Emitter cut-off current	$V_{EB}=5V, I_C=0$	--	--	100	nA
h_{FE}	DC current gain	$V_{CE}=6V, I_C=2mA$	120	--	700	
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C=100mA, I_B=10mA$	--	--	0.25	V
f_T	Transition frequency	$V_{CE}=10V, I_C=1mA$	80	--	--	MHz
C_{ob}	Collector output capacitance	$V_{CB}=10V, I_E=0, f=1MHz$	--	--	3.5	pF

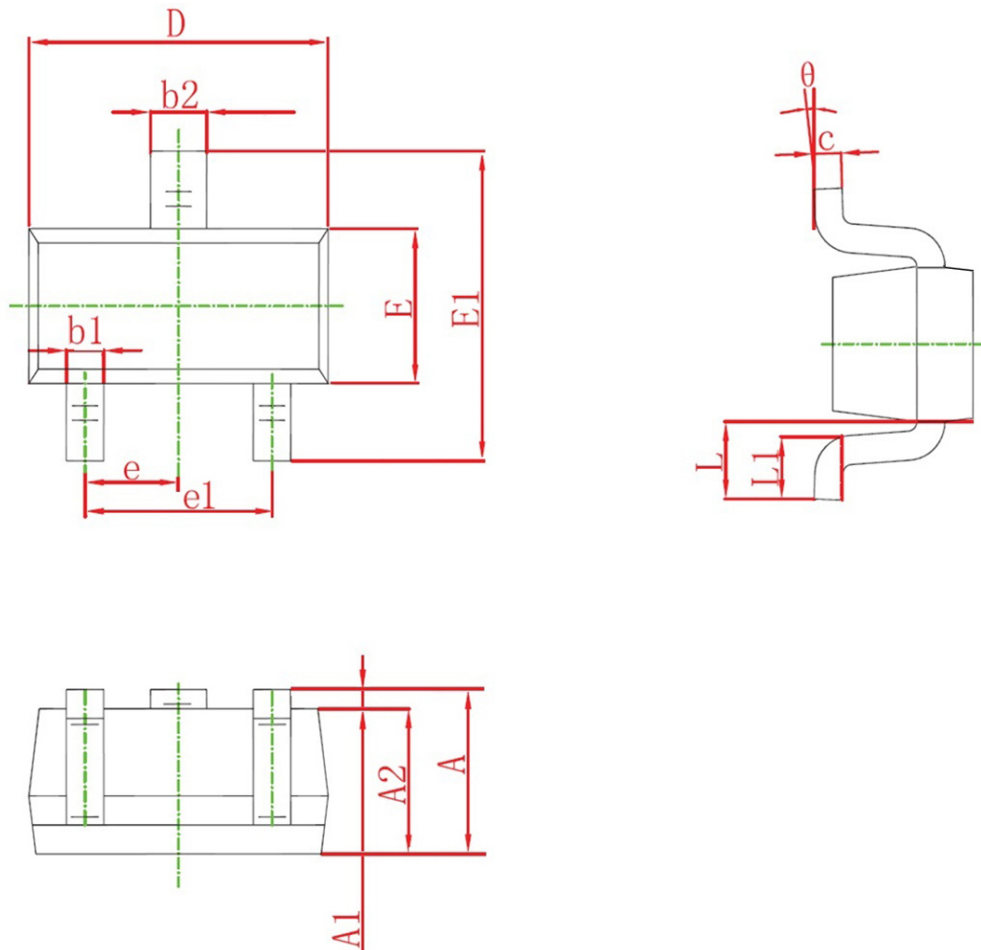
Classification of h_{FE}

Rank	Y	G	L
Marking	LY	LG	LL
Range	120-240	200-400	350-700

Typical Characteristics




SOT-523 Package information



Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	0.700	0.900	0.028	0.035
A1	0.000	0.100	0.000	0.004
A2	0.700	0.800	0.028	0.031
b1	0.150	0.250	0.006	0.010
b2	0.250	0.350	0.010	0.014
c	0.100	0.200	0.004	0.008
D	1.500	1.700	0.059	0.067
E	0.700	0.900	0.028	0.035
E1	1.450	1.750	0.057	0.069
e	0.500TYP		0.020TYP	
e1	0.900	1.100	0.035	0.043
L	0.400REF		0.016REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°