

NPN Transistors

■ Features

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



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V _{CBO}	60	V
Collector - Emitter Voltage	V _{CEO}	50	
Emitter - Base Voltage	V _{EBO}	5	
Collector Current - Continuous	I _c	150	mA
Collector Power Dissipation	P _c	100	mW
Thermal Resistance From Junction To Ambient	R _{θJA}	1250	°C/W
Junction Temperature	T _J	150	°C
Storage Temperature Range	T _{stg}	-55 to 150	

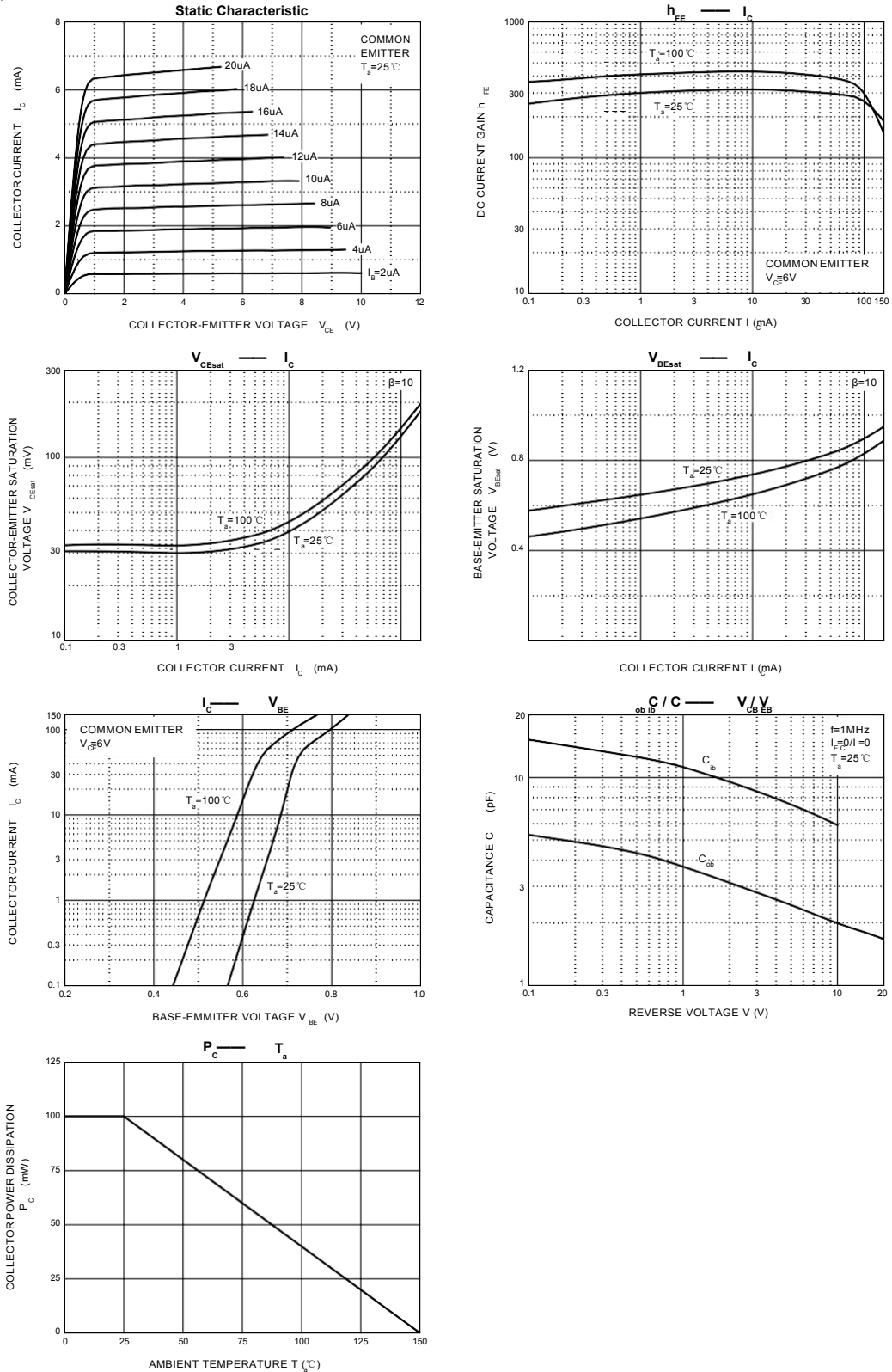
■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V _{CBO}	I _c = 100 μA, I _E = 0	60			V
Collector- emitter breakdown voltage	V _{CEO}	I _c = 1 mA, I _B = 0	50			
Emitter - base breakdown voltage	V _{EBO}	I _E = 100 μA, I _c = 0	5			
Collector-base cut-off current	I _{CBO}	V _{CB} = 60V, I _E = 0			0.1	uA
Emitter cut-off current	I _{EBO}	V _{EB} = 5V, I _c =0			0.1	
Collector-emitter saturation voltage	V _{CE(sat)}	I _c =100mA, I _B =10mA			0.25	V
Base - emitter saturation voltage	V _{BE(sat)}	I _c =100mA, I _B =10mA			1.2	
DC current gain	h _{FE}	V _{CE} = 6V, I _c = 2mA	120		700	
Collector output capacitance	C _{ob}	V _{CB} = 10V, I _E = 0, f=1MHz			3.5	pF
Transition frequency	f _t	V _{CE} = 10V, I _c = 1mA	80			MHz

■ Classification of h_{FE}

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

Typical Characteristics

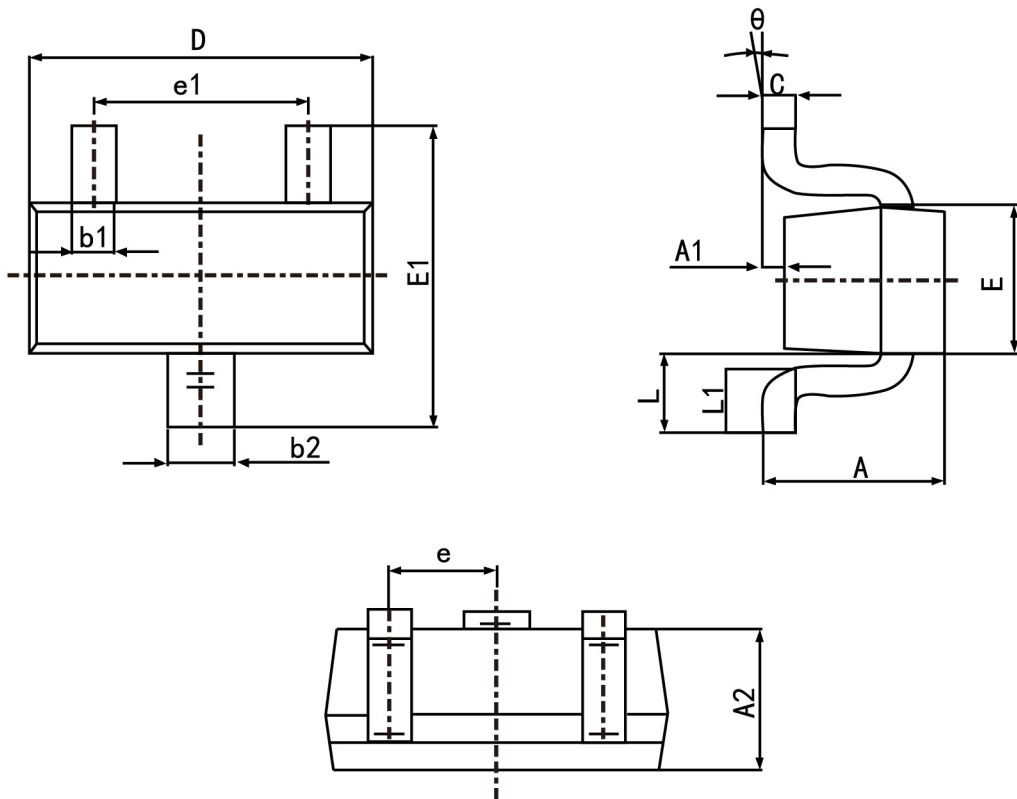




PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-523



Symbol	Dimension in Millimeters	
	Min	Max
A	0.700	0.900
A1	0.000	0.100
A2	0.700	0.800
b1	0.150	0.250
b2	0.250	0.350
c	0.100	0.200
D	1.500	1.700
E	0.700	0.900
E1	1.450	1.750
e	0.500	TYP.
e1	0.900	1.100
L	0.400 REF.	
L1	0.260	0.460
θ	0°	8°