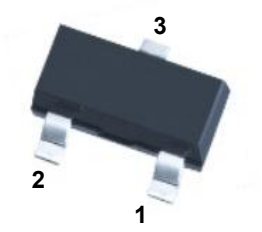
GOOD-ARK
SEMICONDUCTOR

GSMMBTA44
NPN Transistor

Features

- High Breakdown Voltage
- Low Saturation Voltage
- RoHS Compliant

1. Emitter
2. Base
3. Collector



SOT-23

Applications

- High Voltage Control Circuits

Absolute Maximum Ratings

(T_A=25°C unless otherwise specified)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	500	V
Collector to Emitter Voltage	V_{CEO}	400	V
Emitter to Base Voltage	V_{EBO}	6.0	V
Collector Current	I_C	300	mA
Collector Power Dissipation	P_C	350	mW
Collector Power Dissipation	$P_{C(TC=25°C)}$	1.5	W
Junction Temperature	T_J	-55 to +150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C

Thermal Characteristics

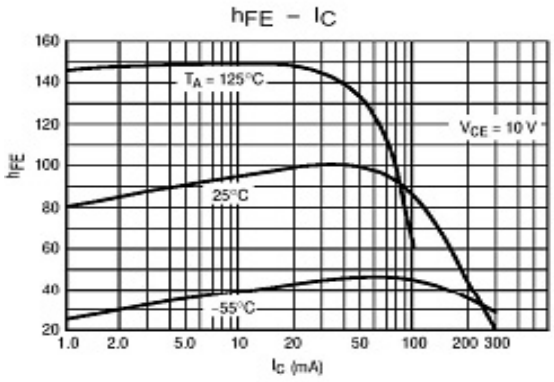
Parameter	Symbol	Typ.	Max.	Unit
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	---	357	°C/W

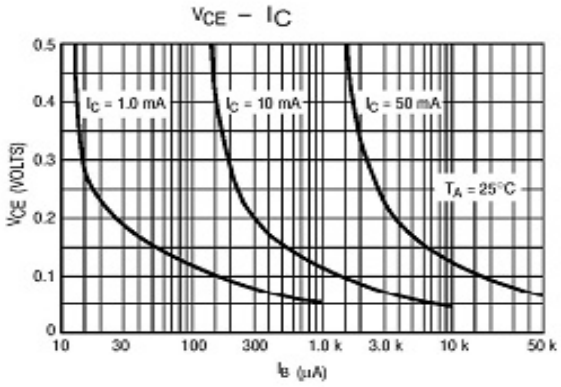
Electrical Characteristics

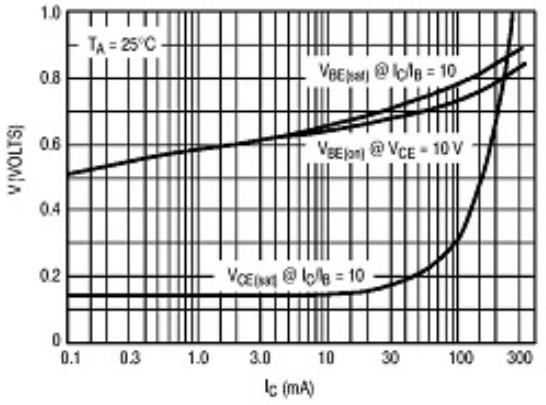
(T_A=25°C unless otherwise specified)

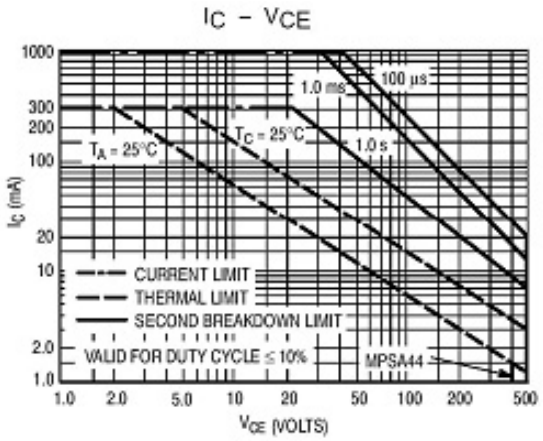
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	V_{CEO}	I_C=100μA I_E=0	500	--	--	V
Collector to Base Breakdown Voltage	V_{CBO}	I_C=1.0mA I_B=0	400	--	--	V
Emitter to Base Breakdown Voltage	V_{EBO}	I_E=10μA I_C=0	6.0	--	--	V
Collector Cut-Off Current	I_{CBO}	V_{CB}=400V I_E=0	--	--	0.1	μA
Collector Cut-Off Current	I_{CEO}	V_{CE}=400V V_{BE}=0	--	--	0.5	μA
Emitter Cut-Off Current	I_{EBO}	V_{CE}=4.0V I_C=0	--	--	0.1	μA
Forward Current Transfer Ratio(1)	$h_{FE(1)}$	V_{CE}=10V I_C=10mA	50	--	200	
Forward Current Transfer Ratio(2)	$h_{FE(2)}$	V_{CE}=10V I_C=100mA	40	--	--	
Forward Current Transfer Ratio(3)	$h_{FE(3)}$	V_{CE}=10V I_C=50mA	45	--	--	
Forward Current Transfer Ratio(4)	$h_{FE(4)}$	V_{CE}=10V I_C=1.0mA	40	--	--	
Collector-Emitter Saturation Voltage(1)	$V_{CE(sat)(1)}$	I_C=1.0mA I_B=0.1mA	--	--	0.4	V
Collector-Emitter Saturation Voltage(2)	$V_{CE(sat)(2)}$	I_C=10mA I_B=1.0mA	--	--	0.5	V
Collector-Emitter Saturation Voltage(3)	$V_{CE(sat)(3)}$	I_C=50mA I_B=5.0mA	--	--	0.75	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	I_C=10mA I_B=1.0mA	--	--	0.75	V
Output Capacitance	C_{ob}	V_{CB}=20V I_E=0 f=1.0MHz	--	--	7.0	pF

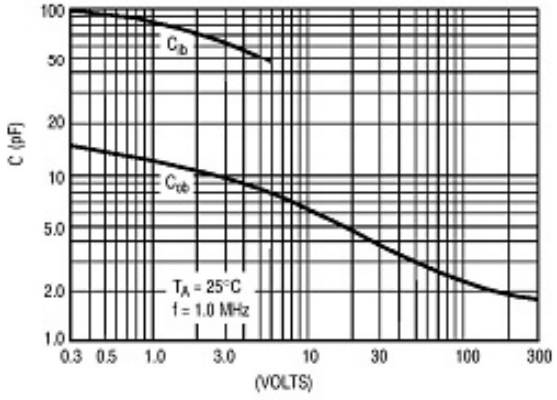
Typical Characteristic Curves

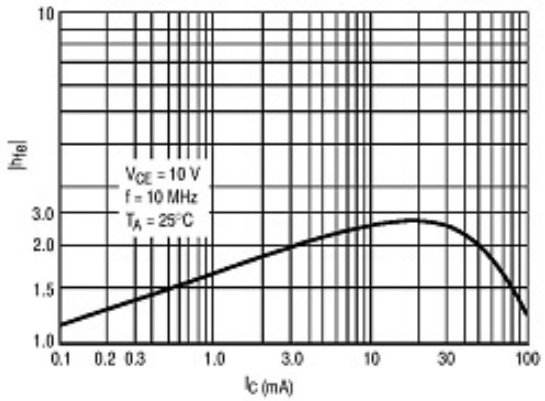




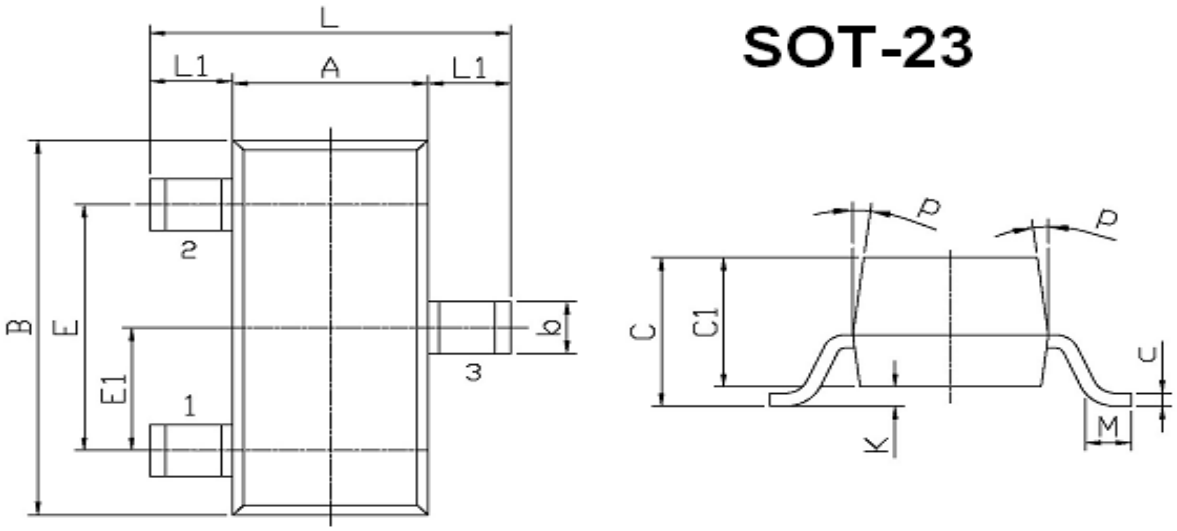








Package Outline Dimensions



Symbol	Dimensions In Millmeters		Symbol	Dimensions In Millmeters	
	Min	Max		Min	Max
L	2.2	2.7	C	1.30Max	
L1	0.45	0.65	C1	0.90	1.20
A	1.15	1.50	c	0.05	0.20
B	2.70	3.10	K	0	0.10
E	1.70	2.10	M	0.20MIN	
E1	0.85	1.05	P	7	
b	0.35	0.55			