



THE DATASHEET OF MMSTA92-TP



Features

- Epitaxial Planar Die Construction
- Ideal for Medium Power Amplification and Switching
- Halogen Free. "Green" Device (Note 1)
- Moisture Sensitivity Level 1
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings @ 25°C Unless Otherwise Specified

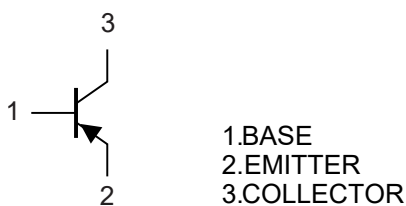
- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 625°C/W Junction to Ambient

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	-300	V
Collector-Emitter Voltage	V_{CEO}	-300	V
Emitter-Base Voltage	V_{EBO}	-5	V
Continuous Collector Current	I_C	-100	mA
Power Dissipation	P_D	200	mW

Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

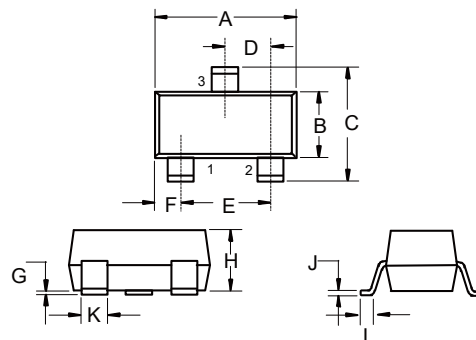
Marking: K3R

Internal Structure



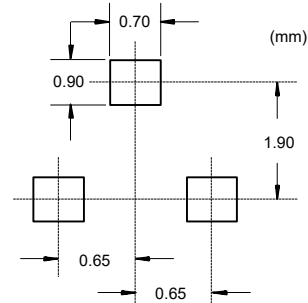
PNP Small Signal Transistors

SOT-323



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.071	0.087	1.80	2.20	
B	0.045	0.053	1.15	1.35	
C	0.083	0.096	2.10	2.45	
D	0.026		0.65		TYP.
E	0.047	0.055	1.20	1.40	
F	0.012	0.016	0.30	0.40	
G	0.000	0.004	0.00	0.10	
H	0.035	0.044	0.90	1.10	
J	0.002	0.010	0.05	0.25	
K	0.006	0.016	0.15	0.40	
L	0.010	0.018	0.26	0.46	

QseecqrcbAQmjbcpAN_bAJ_wmsr



Electrical Characteristics @ $T_A=25^\circ\text{C}$ Unless Otherwise Specified

Parameter	Symbol	Min	Typ	Max	Units	Conditions
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-300			V	$I_C=-100\mu\text{A}, I_E=0$
Collector-Emitter Breakdown Voltage*	$V_{(BR)CEO}$	-300			V	$I_C=-1\text{mA}, I_B=0$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5			V	$I_E=-100\mu\text{A}, I_C=0$
Collector Cutoff Current	I_{CBO}			-0.25	μA	$V_{CB}=-200\text{V}, I_E=0$
Emitter Cutoff Current	I_{EBO}			-0.1	μA	$V_{EB}=-3\text{V}, I_C=0$
DC Current Gain*	$h_{FE(1)}$	25				$V_{CE}=-10\text{V}, I_C=-1\text{mA}$
	$h_{FE(2)}$	40				$V_{CE}=-10\text{V}, I_C=-10\text{mA}$
	$h_{FE(3)}$	25				$V_{CE}=-10\text{V}, I_C=-30\text{mA}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			-0.4	V	$I_C=-20\text{mA}, I_B=-2\text{mA}$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$			-0.9	V	$I_C=-20\text{mA}, I_B=-2\text{mA}$
Transition Frequency	f_T	50			MHz	$V_{CE}=-20\text{V}, I_C=-10\text{mA}, f=100\text{MHz}$
Collector-Base Capacitance	C_{cb}			6	pF	$V_{CB}=-20\text{V}, I_E=0, f=1\text{MHz}$

*.Pulse test: Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2.0\%$.

Curve Characteristics

Fig. 1 - Static Characteristics

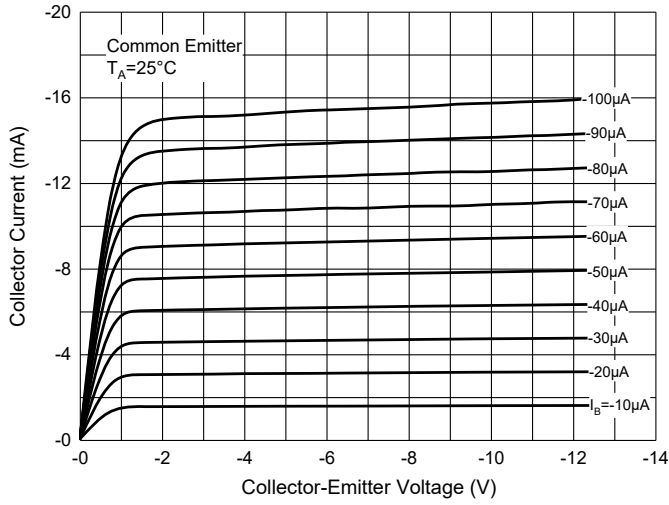


Fig. 2 - DC Current Gain Characteristics

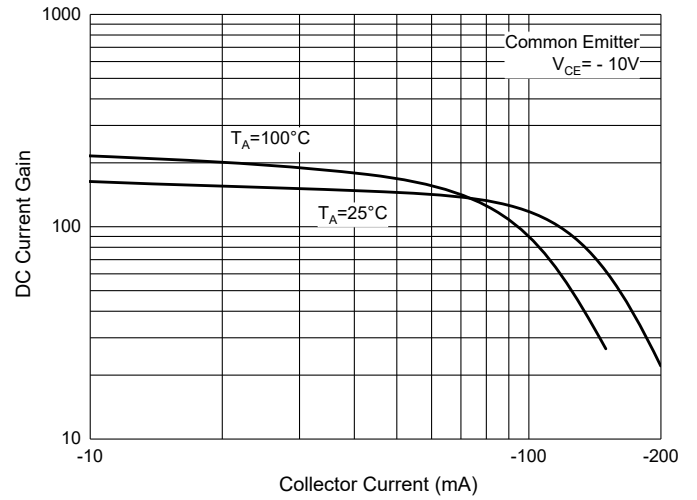


Fig. 3 - Base-Emitter Saturation Voltage Characteristics

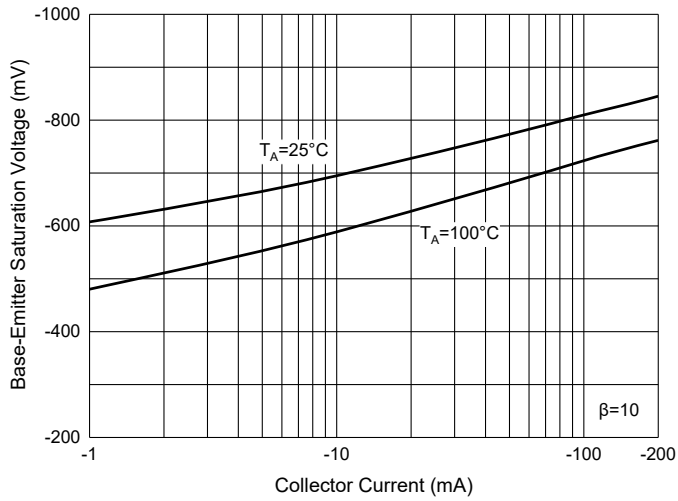


Fig. 4 - Collector-Emitter Saturation Voltage Characteristics

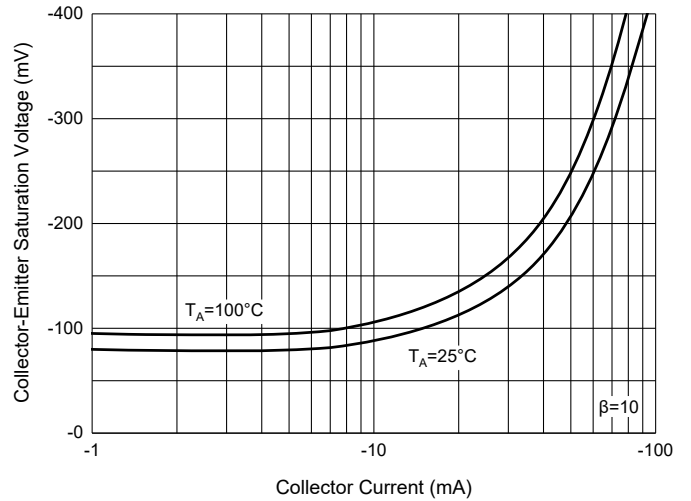


Fig. 5 - Base-Emitter Voltage Characteristics

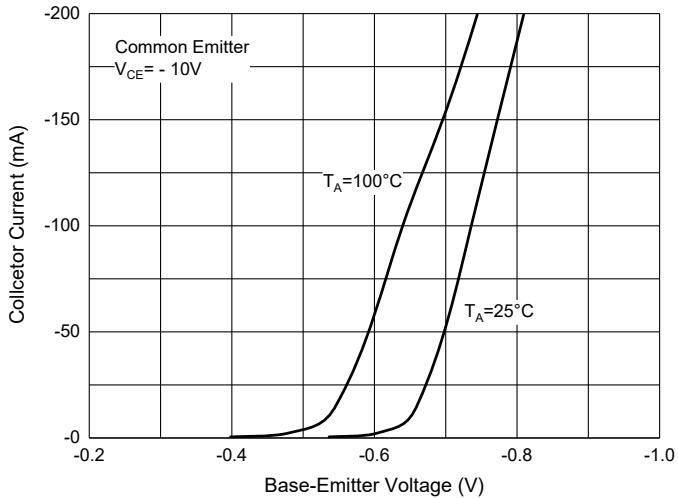
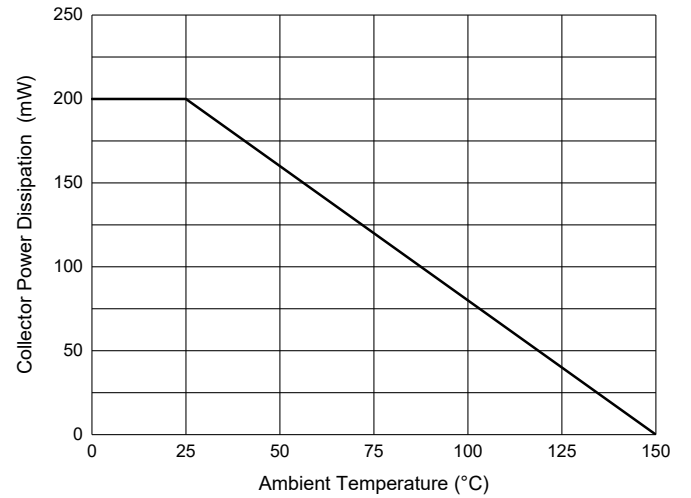


Fig. 6 - Collector Power Derating Curve



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

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