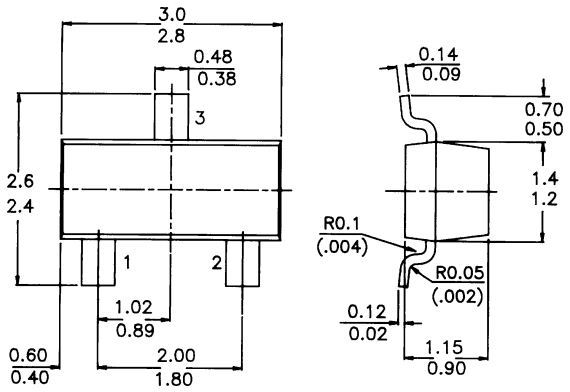
SOT-23 Formed SMD Package **CMMT591**

SILICON PLANAR EPITAXIAL TRANSISTORS

PNP transistor

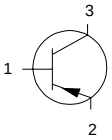
Marking
CMMT = 591

PACKAGE OUTLINE DETAILS
ALL DIMENSIONS IN mm



Pin configuration

1 = BASE
2 = EMITTER
3 = COLLECTOR



ABSOLUTE MAXIMUM RATINGS

Collector-base voltage (open emitter)	V_{CBO}	*max.*	*80*	*V*
Collector-emitter voltage (open base)	V_{CEO}	*max.*	*60*	*V*
Emitter-base voltage (open collector)	V_{EBO}	*max.*	*5*	*V*
Collector current	I_C	*max.*	*1*	*A*
Peak Pulse current	I_{CM}	*max.*	*2*	*A*
Base current	I_B	*max.*	*200*	*mA*
Total power dissipation at T_{amb} = 25°C	P_{tot}	*max.*	*500*	*mW*
Junction temperature	T_j	*max.*	*150*	*° C*
D.C. current gain				
$-I_C$ = 500 mA; V_{CE} = 5 V	h_{FE}	*min.*	*100*	
		max.	*300*	
Transition frequency at f = 100 MHz				
I_C = 50 mA; V_{CE} = 10 V	f_T	*min.*	*150*	*MHz*

RATINGS *(at T_A = 25°C unless otherwise specified)*

Limiting values			
Collector-base voltage (open emitter)	V_{CBO}	*max.*	*80 V*
Collector-emitter voltage (open base)	V_{CEO}	*max.*	*60 V*
Emitter-base voltage (open collector)	V_{EBO}	*max.*	*5 V*
Collector current	I_C	*max.*	*1 A*
Peak Pulse current	I_{CM}	*max.*	*2 A*
Base current	I_B	*max.*	*200 mA*
Total power dissipation at T_{amb} = 25°C	P_{tot}	*max.*	*500 mW*
Storage temperature	T_{stg}	*-55 to +150*	*° C*
Junction temperature	T_j	*max.*	*150 ° C*

CHARACTERISTICS *(at T_A = 25°C unless otherwise specified)*

Collector cut-off current			
I_E = 0; V_{CB} = 60 V	I_{CBO}	*max.*	*100 nA*
V_{BE} = 0; V_{CE} = 60 V	I_{CES}	*max.*	*100 nA*
Emitter cut-off current			
V_{EB} = 4 V; I_C = 0	I_{EBO}	*max.*	*100 nA*
Breakdown voltages			
I_C = 10 mA; I_B = 0	V_{CEO}	*min.*	*60 V*
I_C = 100 µA; I_E = 0	V_{CBO}	*min.*	*80 V*
I_E = 100 µA; I_C = 0	V_{EBO}	*min.*	*5 V*
Base-emitter voltage			
I_C = 1 A; V_{CE} = 5 V	V_{BE}*	*max.*	*1 V*
Saturation voltage			
I_C = 500 mA; I_B = 50 mA	V_{CEsat}*	*max.*	*300 mV*
I_C = 1 A; I_B = 100 mA		*max.*	*600 mV*
I_C = 1 A; I_B = 100 mA	V_{BEsat}*	*max.*	*1.2 V*
D.C. current gain			
I_C = 1 mA; V_{CE} = 5 V	h_{FE}	*min.*	*100*
*I_C = 500 mA; V_{CE} = 5 V**		*min.*	*100*
		max.	*300*
*I_C = 1 A; V_{CE} = 5 V**		*min.*	*80*
*I_C = 2 A; V_{CE} = 5 V**		*min.*	*15*
Collector capacitance at f = 1 MHz			
I_E = 0; V_{CB} = 10 V	C_{ob}	*max.*	*10 pF*
Transition frequency at f = 100 MHz			
I_C = 50 mA; V_{CE} = 10 V	f_T	*min.*	*150 MHz*

* *Measured under pulsed conditions: Pulse width = 300 µs, duty cycle = 2%.*

Customer Notes

Disclaimer

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