



SOT-363 Plastic-Encapsulate Transistors

MMDT2907A TRANSISTOR (PNP)

FEATURES

Power dissipation

$$P_{CM}: 0.15 \text{ W (Tamb=25}^{\circ}\text{C)}$$

Collector current

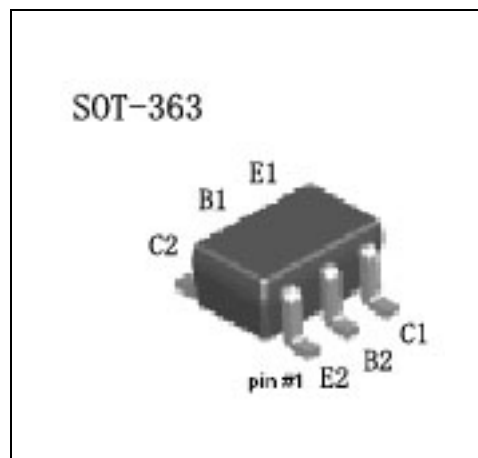
$$I_{CM}: -0.6 \text{ A}$$

Collector-base voltage

$$V_{(BR)CBO}: -60 \text{ V}$$

Operating and storage junction temperature range

$$T_J, T_{stg}: -55^{\circ}\text{C to } +150^{\circ}\text{C}$$



ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -10\mu\text{A}, I_E = 0$	-60		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -10\text{mA}, I_B = 0$	-60		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -10\mu\text{A}, I_C = 0$	-5		V
Collector cut-off current	I_{CBO}	$V_{CB} = -50\text{V}, I_E = 0$		-0.01	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -3\text{V}, I_C = 0$		-0.01	μA
DC current gain	$h_{FE(1)}$	$V_{CE} = -10\text{V}, I_C = -0.1\text{mA}$	75		
	$h_{FE(2)}$	$V_{CE} = -10\text{V}, I_C = -1\text{mA}$	100		
	$h_{FE(3)}$	$V_{CE} = -10\text{V}, I_C = -10\text{mA}$	100		
	$h_{FE(4)}$	$V_{CE} = -10\text{V}, I_C = -150\text{mA}$	100	300	
	$h_{FE(5)}$	$V_{CE} = -10\text{V}, I_C = -500\text{mA}$	50		
Collector-emitter saturation voltage	$V_{CE(sat)1}$	$I_C = -150\text{mA}, I_B = -15\text{mA}$		-0.4	V
	$V_{CE(sat)2}$	$I_C = -500\text{mA}, I_B = -50\text{mA}$		-1.6	V
Base-emitter saturation voltage	$V_{BE(sat)1}$	$I_C = -150\text{mA}, I_B = -15\text{mA}$		-1.3	V
	$V_{BE(sat)2}$	$I_C = -500\text{mA}, I_B = -50\text{mA}$		-2.6	V
Transition frequency	f_T	$V_{CE} = -20\text{V}, I_C = -50\text{mA}$ $f = 100\text{MHz}$	200		MHz
Output Capacitance	C_{ob}	$V_{CB} = -10\text{V}, I_E = 0$ $f = 1\text{MHz}$		8	pF
Input Capacitance	C_{ib}	$V_{EB} = -2\text{V}, I_C = 0$ $f = 1\text{MHz}$		30	pF
Delay time	t_d	$V_{CC} = -30\text{V}, I_C = -150\text{mA},$ $I_{B1} = -15\text{mA}$		10	nS
Rise time	t_r			40	nS
Storage time	t_s	$V_{CC} = -6\text{V}, I_C = -150\text{mA}$ $I_{B1} = I_{B2} = -15\text{mA}$		225	nS
Fall time	t_f			60	nS

Marking	K2F
---------	-----

Typical Characteristics

MMDT2907A

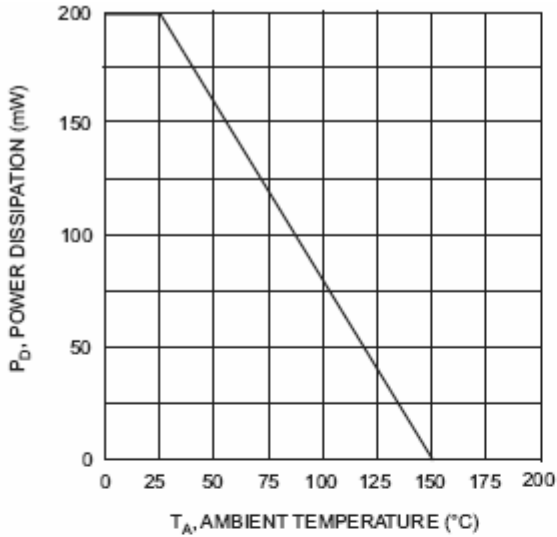


Fig. 1, Max Power Dissipation vs Ambient Temperature

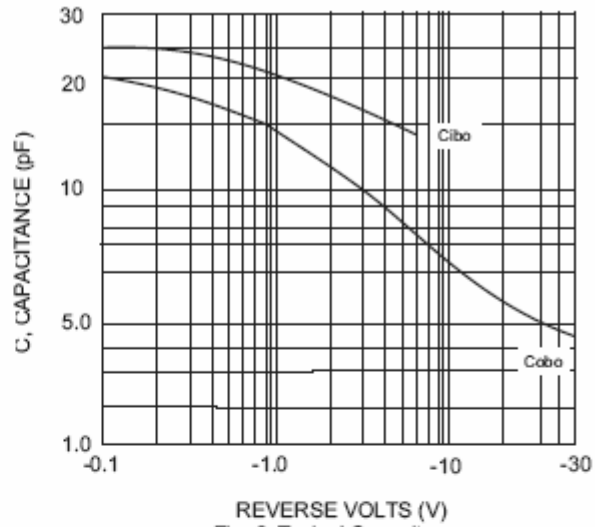


Fig. 2 Typical Capacitance

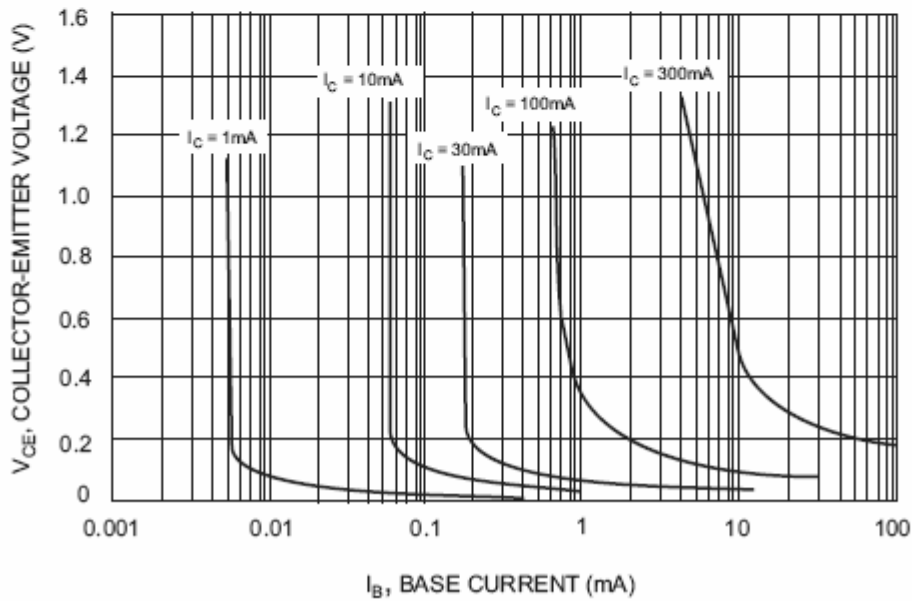


Fig. 3 Typical Collector Saturation Region