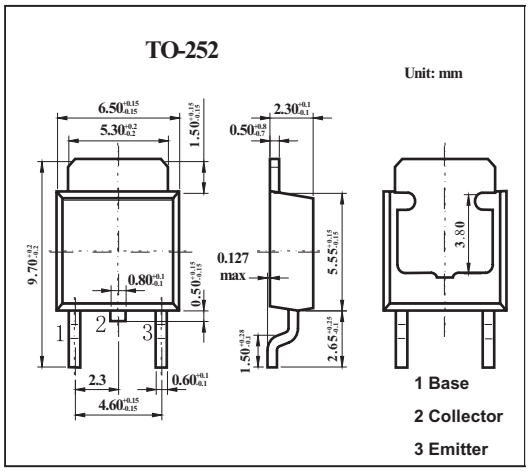
Complementary Power Transistors

MJD44H11



■ Features

- Lead Formed for Surface Mount Applications in Plastic Sleeves
- Fast Switching Speeds
- Complementary Pairs Simplifies Designs
- Pb-Free Packages are Available

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-emitter voltage	V_{CEO}	80	V
Emitter-base voltage	V_{EB}	5	V
Collector current	I_C	8	A
Collector current (pulse)	I_{CP}	16	A
Total Device Dissipation FR-5 Board @T_A = 25℃ Derate above 25℃	P_D	 20 0.16	 W W/℃
Total Device Dissipation Alumina Substrate @T_A = 25℃ Derate above 25℃	P_D	 1.75 0.014	 W W/℃
Junction temperature	T_j	150	℃
Storage temperature	T_{stg}	-55 to +150	℃
Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	6.25	℃/W
Thermal Resistance, Junction-to-Ambient	$R_{\theta JA}$	71.4	℃/W
Lead Temperature for Soldering	T_L	260	℃

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■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector-emitter sustaining voltage	$V_{CEo(sus)}$	I_C = 30 mA, I_B = 0	80			V
Collector cutoff current	I_{CES}	V_{CE} = Rated V_{CEO},V_{EB} = 0			10	μA
Emitter cutoff current	I_{EBO}	V_{BE} = 5V, I_C = 0			50	μA
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = 8 A, I_B = 0.4 A			1	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C = 8 A, I_B = 0.8 A			1.5	V
DC current gain	H_{FE}	I_C = 2 A, V_{CE} = 1 V	60			
		I_C = 4 A, V_{CE} = 1 V	40			
Collector capacitance	C_{cb}	V_{CB} = 10 V,f_{test} = 1 MHz		130		pF
Current-gain-bandwidth product *2	f_T	I_C = 0.5 A,V_{CE} = 10 V,f = 20 MHz		50		MHz
Delay and rise times	$t_d + t_r$	I_C = 5 A, I_{B1} = 0.5 A		300		ns
Storage time	t_s	I_C = 5 A, I_{B1} = I_{B2} = 0.5 A		500		ns
Fall time	t_f	I_C = 5 A, I_{B1} = I_{B2} = 0.5 A		140		ns

■ Marking

Marking	J44H11