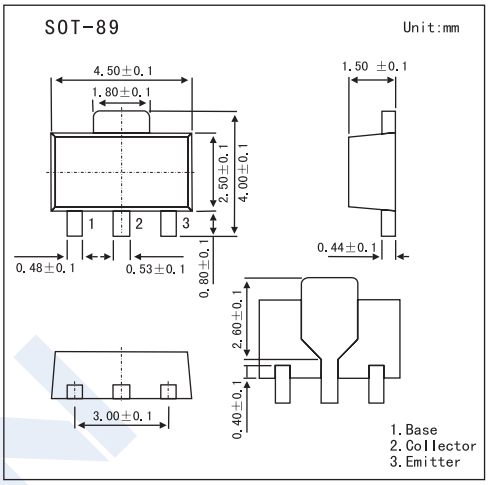
Digital Transistors

HR1A3M



■ Features

- Up to 2A High Current Drives Such As IC Outputs and Actuators Available
- On-chip Bias Resistor
- Low Power Consumption During Drive

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	-60	V
Collector-Emitter Voltage	V_{CEO}	-60	V
Emitter-Base Voltage	V_{EBO}	-10	V
Collector Current (DC)	$I_{C(DC)}$	-1.0	A
Collector Current (Pulse)	$I_{C(pulse)}$ *1	-2.0	A
Base Current (DC)	$I_{B(DC)}$	-0.02	A
Total Power Dissipation	P_T *2	2.0	W
Junction temperature	T_j	150	℃
Storage temperature	T_{stg}	-55 to +150	℃

*1 PW≤10ms, Duty Cycle≤50%

*2 When 0.7mm x 16cm^2 ceramic board is used.

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector Cut-off Current	I_{CBO}	V_{CB} = -60V, I_E = 0			-100	nA
DC Current Gain	h_{FE} *	V_{CE} = -2.0V , I_C = -0.1A	50			
		V_{CE} = -2.0V , I_C = -0.5A	100			
		V_{CE} = -2.0V , I_C = -1.0A	50			
Low Level Output Voltage	V_{OL} *	V_{IN} = -5.0V, I_C = -0.4A			-0.4	V
Low Level Input Voltage	V_{IL} *	V_{CE} = -5.0V, I_C = -100μA			-0.3	V
Input Resistance	R_1		0.7	1.0	1.3	kΩ
Emitter-Base Resistance	R_2		0.7	1.0	1.3	kΩ

* PW≤350μs, Duty Cycle≤2%

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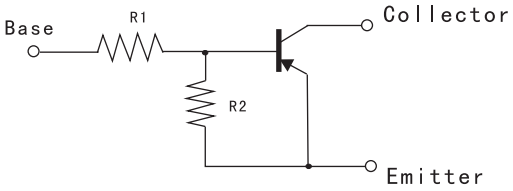
■ Marking

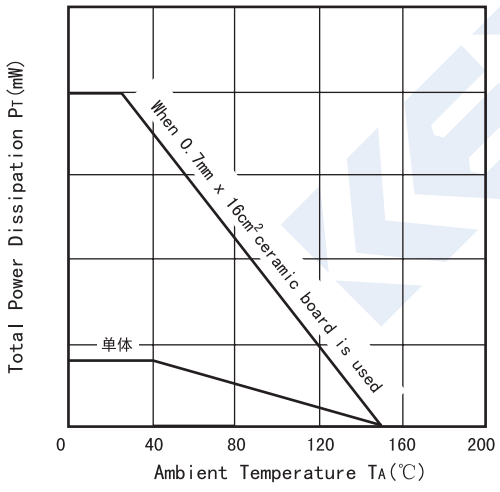
Marking	MP

■ Equivalent Circuit

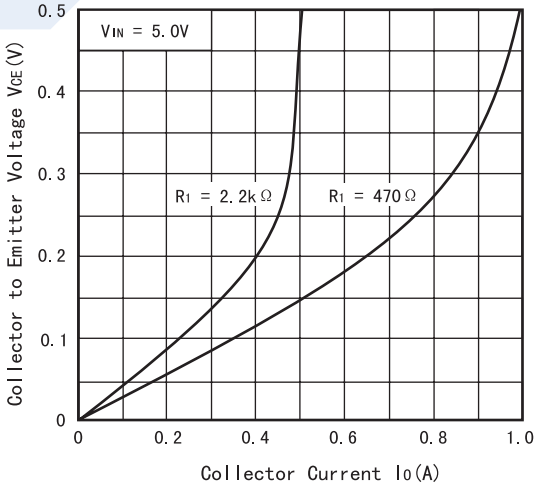


R_1 = 1.0kΩ R_2 = 1.0kΩ

■ Electrical Characteristics Curves

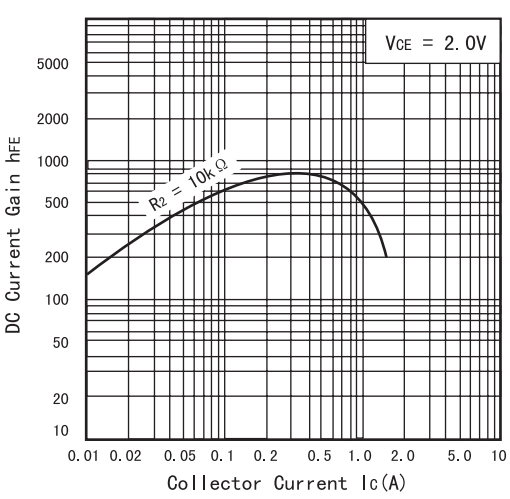


TOTAL POWER DISSIPATION VS.
AMBIENT TEMPERATURE

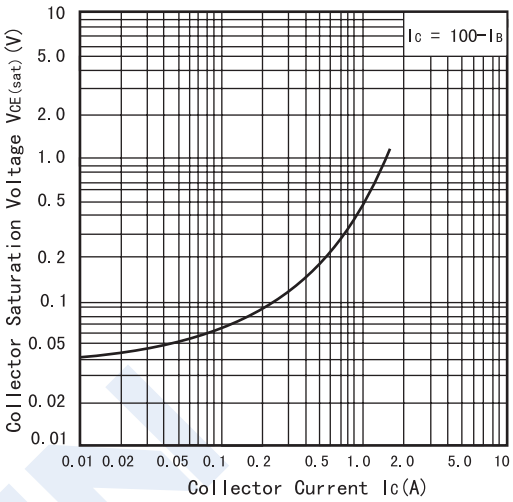


COLLECTOR TO EMITTER VOLTAGE
VS. COLLECTOR CURRENT

HR1A3M



DC CURRENT GAIN VS.
COLLECTOR CURRENT



COLLECTOR SATURATION VOLTAGE
VS. COLLECTOR CURRENT