

2SD2098

Transistor, NPN

Features

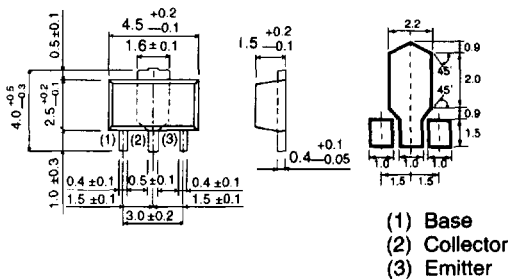
- available in MPT3 (MPT, SOT-89, SC-62) package
- package marking: 2SD2098; DJ★, where ★ is h_{FE} code
- low collector saturation voltage, typically $V_{CE(sat)} = 0.3\text{ V}$ for $I_C/I_B = 4\text{ A}/0.1\text{ A}$
- excellent current-to-gain characteristics

Applications

- stroboscopic flash

Dimensions (Units : mm)

2SD2098 (MPT3)



Absolute maximum ratings ($T_a = 25^{\circ}\text{C}$)

Parameter	Symbol	Limits	Unit	Conditions
Collector-to-base voltage	V_{CBO}	50	V	
Collector-to-emitter voltage	V_{CEO}	20	V	
Emitter-to-base voltage	V_{EBO}	6	V	
Collector current	I_C	5	A	DC
	I_{CP}	10		Single pulse, $P_W = 10\text{ ms}$
Collector dissipation	P_C	0.5	W	
		2.0		Mounted on $40 \times 40 \times 0.7\text{ mm}$ ceramic PCB
Junction temperature	T_j	150	$^{\circ}\text{C}$	
Storage temperature	T_{stg}	$-55 \sim +150$	$^{\circ}\text{C}$	

Electrical characteristics (unless otherwise noted, $T_a = 25^\circ\text{C}$)

Parameter	Symbol	Min	Typical	Max	Unit	Conditions
Collector-to-base breakdown voltage	BV_{CBO}	50			V	$I_C = 50\text{ }\mu\text{A}$
Collector-to-emitter breakdown voltage	BV_{CEO}	20			V	$I_C = 1\text{ mA}$
Emitter-to-base breakdown voltage	BV_{EBO}	6			V	$I_E = 50\text{ }\mu\text{A}$
Collector cutoff current	I_{CBO}			0.5	μA	$V_{CB} = 40\text{ V}$
Emitter cutoff current	I_{EBO}			0.5	μA	$V_{EB} = 5\text{ V}$
DC current gain	h_{FE}	120		560		$V_{CE} = 2\text{ V}$, $I_C = 0.5\text{ A}$, single pulse
Collector-to-emitter saturation voltage	$V_{CE(sat)}$		0.3	1.0	V	$I_C/I_B = 4\text{ A}/0.1\text{ A}$, single pulse
Transition frequency	f_T		150		MHz	$V_{CE} = 6\text{ V}$, $I_E = -50\text{ mA}$, $f = 100\text{ MHz}$
Output capacitance	C_{ob}		35		pF	$V_{CB} = 20\text{ V}$, $I_E = 0\text{ A}$, $f = 1\text{ MHz}$

h_{FE} rankings

Item	Q	R	S
h_{FE}	120 ~ 270	180 ~ 390	270 ~ 560

Electrical characteristic curves

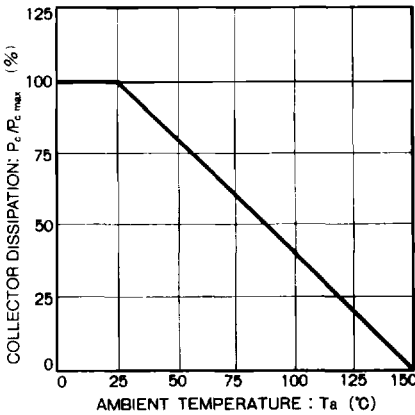


Figure 1

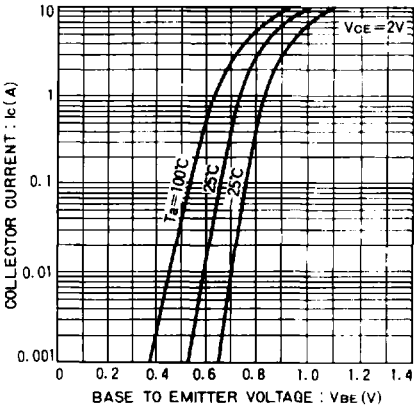


Figure 2

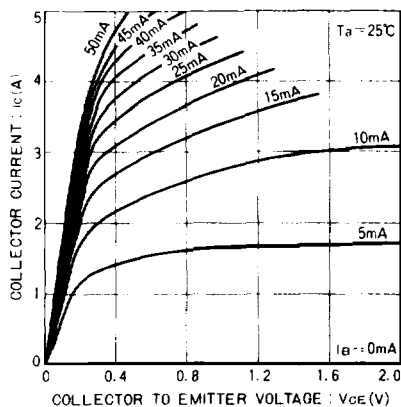


Figure 3

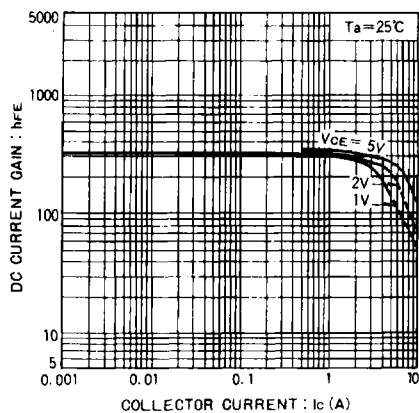


Figure 4

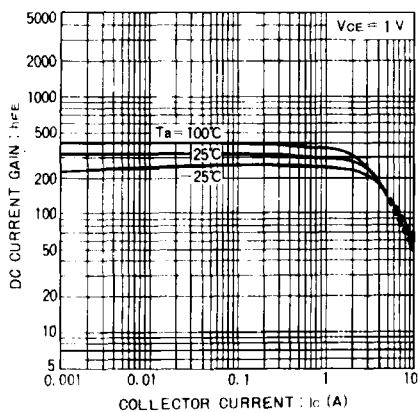


Figure 5

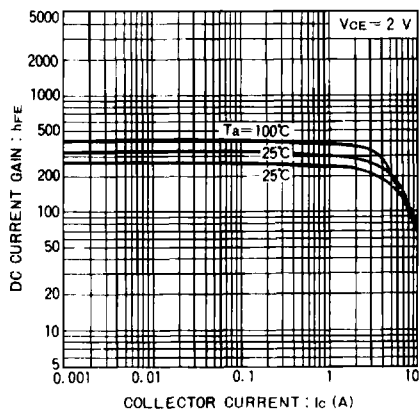


Figure 6

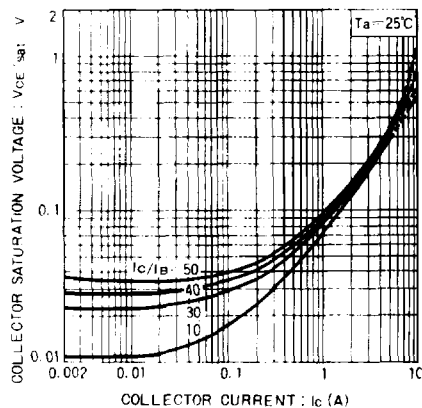


Figure 7

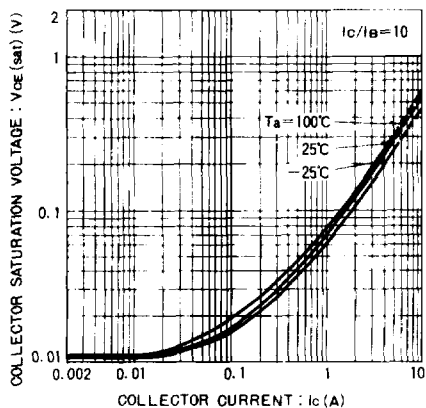


Figure 8

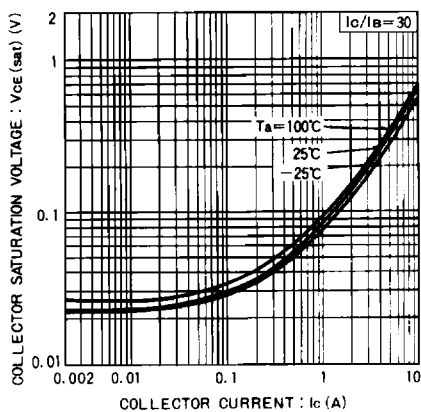


Figure 9

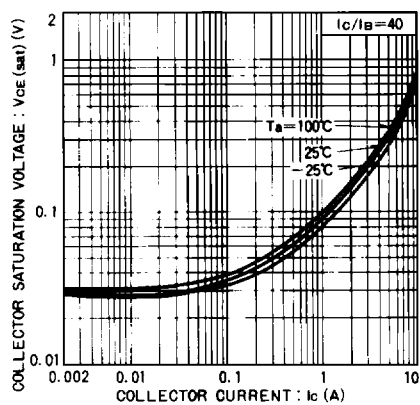


Figure 10

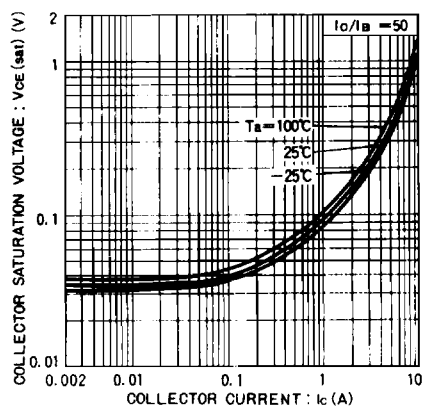


Figure 11

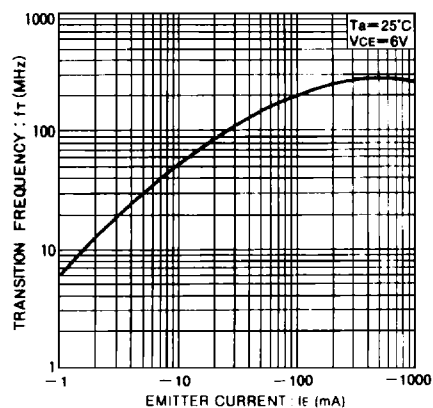


Figure 12

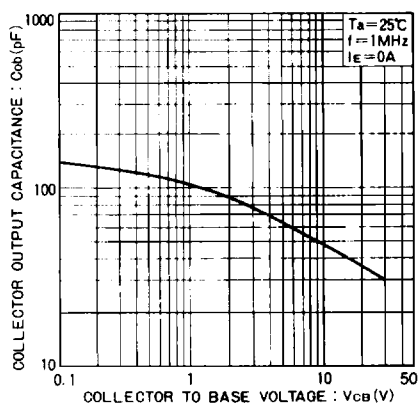


Figure 13

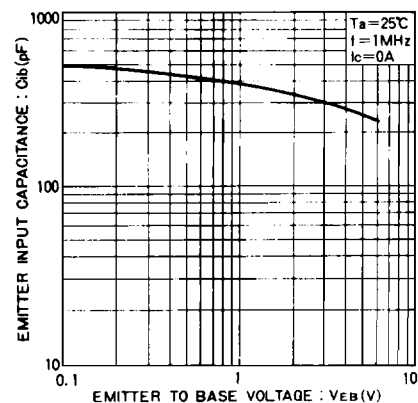


Figure 14

Ordering information

Package	Tape
Code	T100
Basic order quantity	1000
2SD2098	★
★ = Standard, ☆ = Semi-standard, * = Special order	

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

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[2SD2098T100S](#)