

2SD2485

Silicon NPN Epitaxial

Application

Low frequency power amplifier

Features

- Low saturation voltage
 $V_{CE(sat)} = 0.1 \text{ V typ. (at } I_C = 1 \text{ A, } I_B = 50 \text{ mA)}$
- Large current capacitance
 $I_C = 2 \text{ A}$

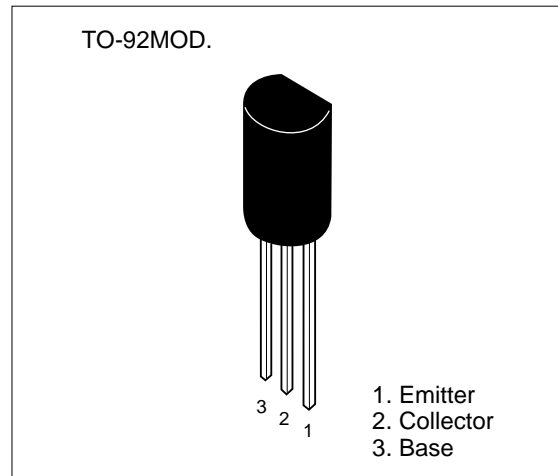


Table 1 Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

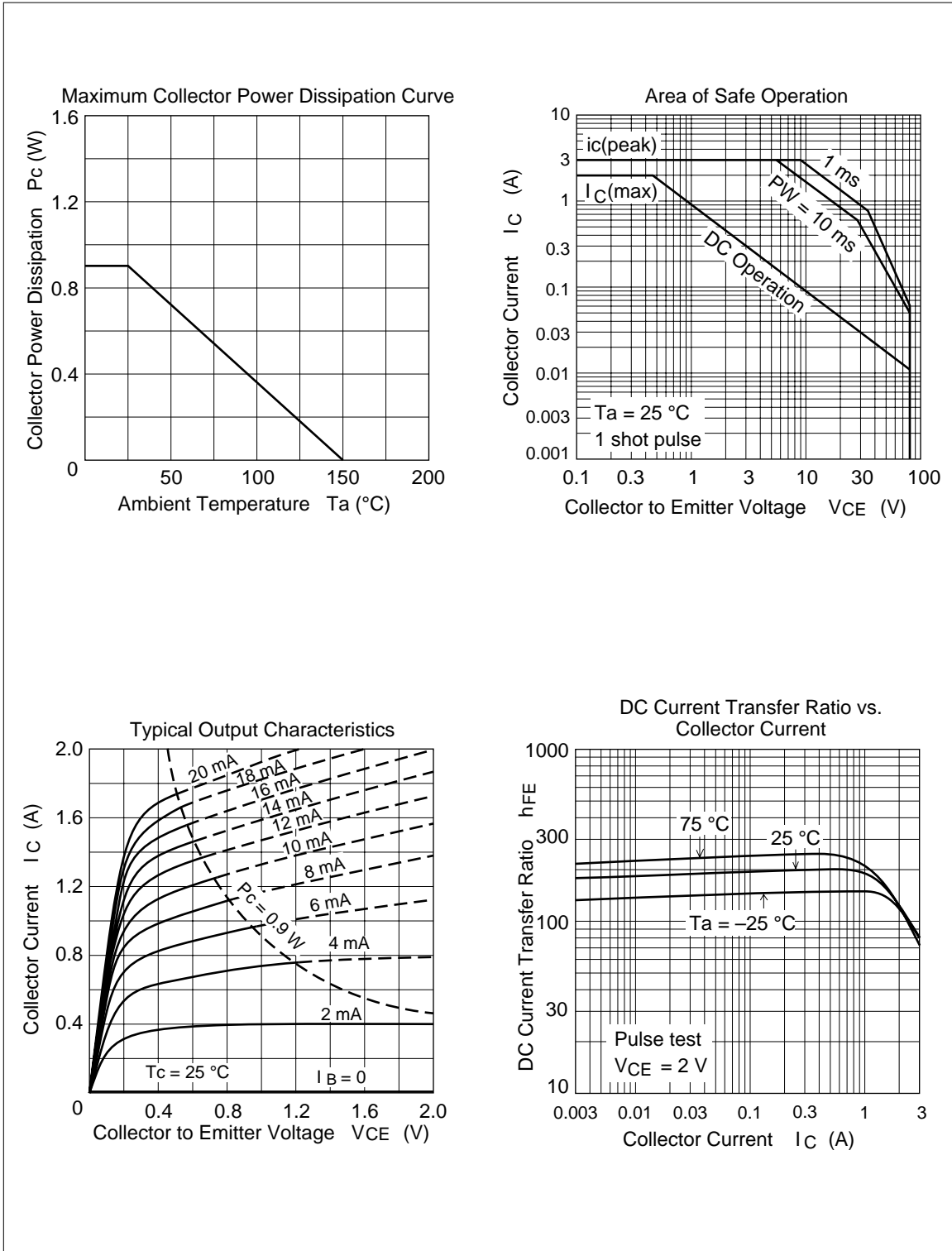
Item	Symbol	Ratings	Unit
Collector to base voltage	V_{CBO}	80	V
Collector to emitter voltage	V_{CEO}	80	V
Emitter to base voltage	V_{EBO}	6	V
Collector current	I_C	2	A
Collector peak current	$i_{c(peak)*}$	3	A
Collector power dissipation	P_C	0.9	W
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

Note: * $PW \leq 10 \text{ ms}$, duty cycle $\leq 20 \%$

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Table 2 Electrical Characteristics (Ta = 25°C)

Item	Symbol	Min	Typ	Max	Unit	Test conditions
Collector to base breakdown voltage	$V_{(BR)CBO}$	80	—	—	V	$I_C = 10 \mu A,$ $I_E = 0$
Collector to emitter breakdown voltage	$V_{(BR)CEO}$	80	—	—	V	$I_C = 1 \text{ mA},$ $R_{BE} = \infty$
Emitter to base breakdown voltage	$V_{(BR)EBO}$	6	—	—	V	$I_E = 10 \mu A$ $I_C = 0$
Collector to base cutoff current	I_{CBO}	—	—	1.0	μA	$V_{CB} = 65 \text{ V},$ $I_E = 0$
Collector to emitter cutoff current	I_{CEO}	—	—	5.0	μA	$V_{CE} = 65 \text{ V},$ $R_{BE} = \infty$
Emitter to base cutoff current	I_{EBO}	—	—	1.0	μA	$V_{EB} = 5 \text{ V},$ $I_C = 0$
DC current transfer ratio	h_{FE1}	120	—	300		$V_{CE} = 2 \text{ V},$ $I_C = 0.5 \text{ A}$
DC current transfer ratio	h_{FE2}	40	—	—		$V_{CE} = 2 \text{ V},$ $I_C = 1.5 \text{ A}$
Collector to emitter saturation voltage	$V_{CE(sat)}$	—	0.1	0.2	V	$I_C = 1 \text{ A}$ $I_B = 50 \text{ mA}$
Base to emitter saturation voltage	$V_{BE(sat)}$	—	—	1.2	V	$I_C = 1 \text{ A}$ $I_B = 50 \text{ mA}$



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