



TO-126 Plastic-Encapsulate Transistors

D882 TRANSISTOR (NPN)

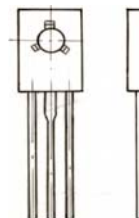
FEATURES

Power dissipation

P_{CM} : 1.25 W ($T_{amb}=25^{\circ}C$)

TO-126

1. EMITTER
2. COLLECTOR
3. BASE



1 2 3

MAXIMUM RATINGS* $T_A=25^{\circ}C$ unless otherwise noted

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	40	V
V_{CEO}	Collector-Emitter Voltage	30	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current -Continuous	3	A
P_D	Total Device Dissipation	1.25	W
T_J	Junction Temperature	150	$^{\circ}C$
T_{stg}	Junction and Storage Temperature	-55-150	$^{\circ}C$

*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

ELECTRICAL CHARACTERISTICS($T_{amb}=25^{\circ}C$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10\text{ mA}, I_B=0$	30			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\text{ mA}, I_C=0$	6			V
Collector cut-off current	I_{CBO}	$V_{CB}=40\text{ V}, I_E=0$			1	μA
Collector cut-off current	I_{CEO}	$V_{CE}=30\text{ V}, I_B=0$			10	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=6\text{ V}, I_C=0$			1	μA
DC current gain	$h_{FE(1)}$	$V_{CE}=2\text{ V}, I_C=1\text{ A}$	60		400	
	$h_{FE(2)}$	$V_{CE}=2\text{ V}, I_C=100\text{ mA}$	32			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=2\text{ A}, I_B=0.2\text{ A}$			0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=2\text{ A}, I_B=0.2\text{ A}$			1.5	V
Transition frequency	f_T	$V_{CE}=5\text{ V}, I_C=0.1\text{ mA}$ $f=10\text{ MHz}$	50			MHz

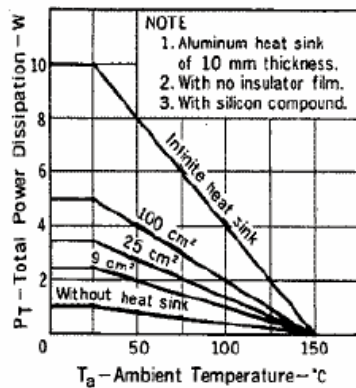
CLASSIFICATION OF $h_{FE(1)}$

Rank	R	O	Y	GR
Range	60-120	100-200	160-320	200-400

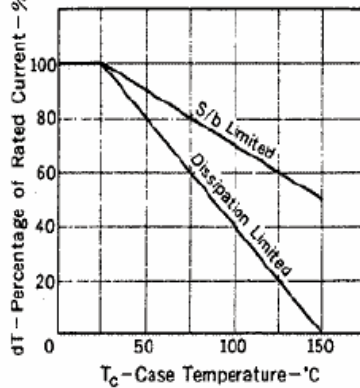
Typical Characteristics

D882

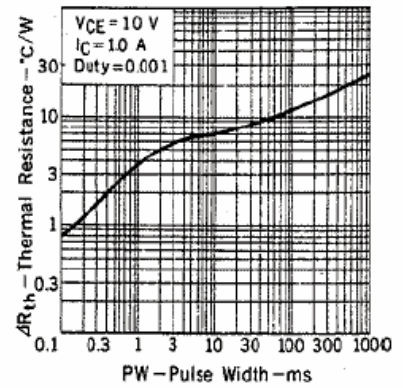
TOTAL POWER DISSIPATION vs. AMBIENT TEMPERATURE



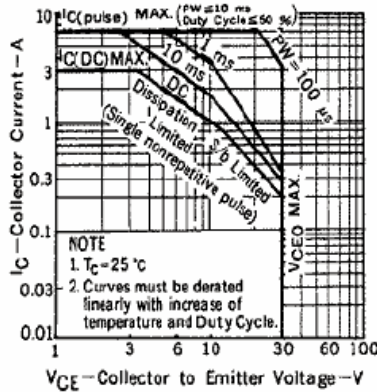
DERATING CURVES FOR ALL TYPES



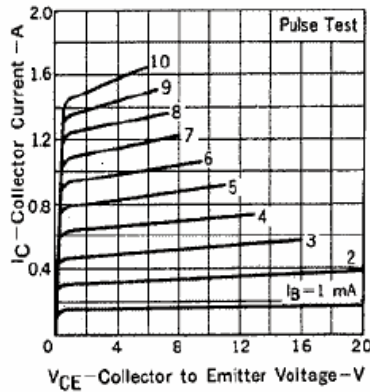
THERMAL RESISTANCE vs. PULSE WIDTH



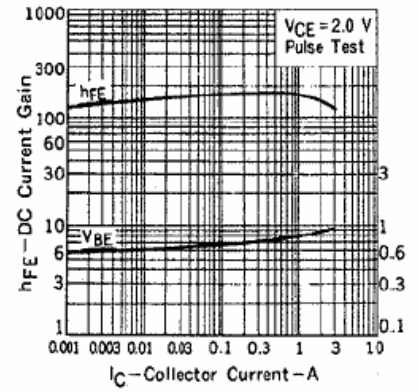
SAFE OPERATING AREAS



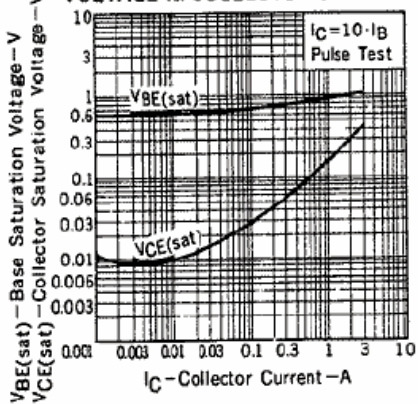
COLLECTOR CURRENT vs. COLLECTOR TO EMITTER VOLTAGE



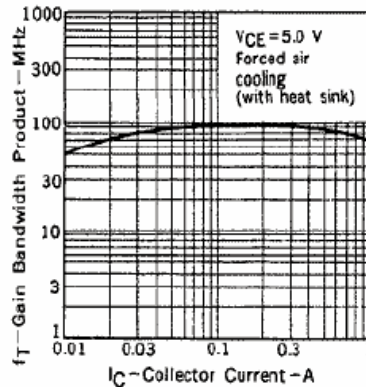
DC CURRENT GAIN, BASE TO EMITTER VOLTAGE vs. COLLECTOR CURRENT



BASE AND COLLECTOR SATURATION VOLTAGE vs. COLLECTOR CURRENT



GAIN BANDWIDTH PRODUCT vs. COLLECTOR CURRENT



INPUT AND OUTPUT CAPACITANCE vs. REVERSE VOLTAGE

