JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

TO-252 Plastic-Encapsulate Transistors

D882 TRANSISTOR (NPN)

TO-252

1. BASE
2. COLLECTOR
3 .EMITTER

FEATURES

Power dissipation

MAXIMUM RATINGS (T_A=25℃ 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	5	V
I_C	Collector Current -Continuous	3	A
P_C	Collector Power Dissipation	1.25	W
T_J	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55-150	℃

ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V(BR)_{CBO}$	I_C = 100μA, I_E=0	40			V
Collector-emitter breakdown voltage	$V(BR)_{CEO}$	I_C = 10mA, I_B=0	30			V
Emitter-base breakdown voltage	$V(BR)_{EBO}$	I_E= 100μA, I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}= 40 V, I_E=0			1	μA
Collector cut-off current	I_{CEO}	V_{CE}= 30 V, I_B=0			10	μA
Emitter cut-off current	I_{EBO}	V_{EB}= 6 V, I_C=0			1	μA
DC current gain	h_{FE}	V_{CE}= 2 V, I_C= 1A	60		400	
Collector-emitter saturation voltage	$V_{CE\ (sat)}$	I_C= 2A, I_B= 0.2 A			0.5	V
Base-emitter saturation voltage	$V_{BE\ (sat)}$	I_C= 2A, I_B= 0.2 A			1.5	V
Transition frequency	f_T	V_{CE}= 5V, I_C=0.1A f =10MHz		90		MHz

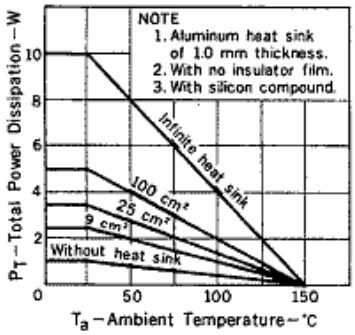
CLASSIFICATION OF h_{FE}

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

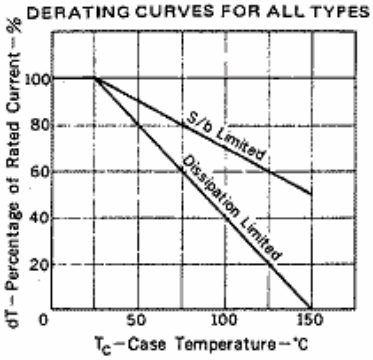
Typical Characteristics

D882

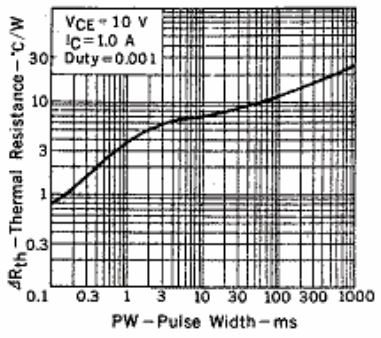
TOTAL POWER DISSIPATION vs. AMBIENT TEMPERATURE



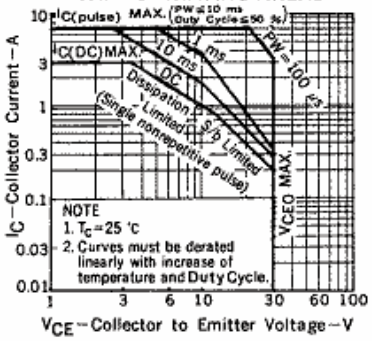
DERATING CURVES FOR ALL TYPES



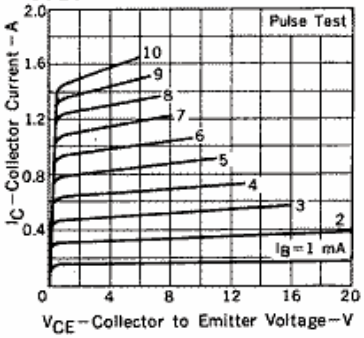
THERMAL RESISTANCE vs. PULSE WIDTH



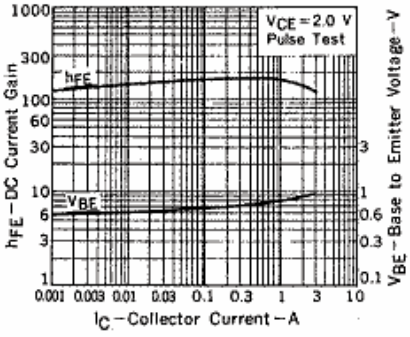
SAFE OPERATING AREAS



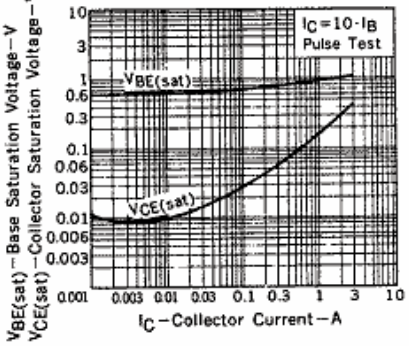
COLLECTOR CURRENT vs. COLLECTOR TO EMITTER VOLTAGE



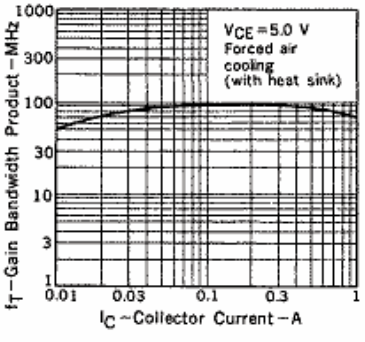
DC CURRENT GAIN, BASE TO EMITTER VOLTAGE vs. COLLECTOR CURRENT



BASE AND COLLECTOR SATURATION VOLTAGE vs. COLLECTOR CURRENT



GAIN BANDWIDTH PRODUCT vs. COLLECTOR CURRENT



INPUT AND OUTPUT CAPACITANCE vs. REVERSE VOLTAGE