



## TO-126 Plastic-Encapsulate Transistors

### 3CA8772 TRANSISTOR ( PNP )

#### FEATURES

Power dissipation

$$P_{CM} : 1.25 \text{ W ( } T_{amb}=25 \text{ )}$$

Collector current

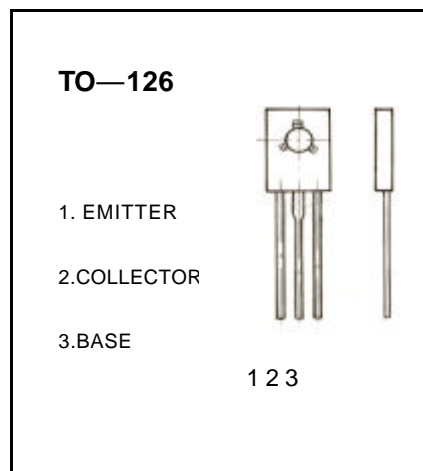
$$I_{CM} : -3 \text{ A}$$

Collector-base voltage

$$V_{(BR)CBO} : -40 \text{ V}$$

Operating and storage junction temperature range

$$T_J, T_{stg}: -55 \text{ to } +150$$



#### ELECTRICAL CHARACTERISTICS ( $T_{amb}=25$ 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	$V_{(BR)CEO}$	$I_C=-10 mA, I_B=0$	-30			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-100 \mu A, I_C=0$	-6			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=-40 V, I_E=0$			-10	$\mu A$
Collector cut-off current	$I_{CEO}$	$V_{CE}=-30 V, I_B=0$			-10	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=-6V, I_C=0$			-10	$\mu A$
DC current gain	$h_{FE}$	$V_{CE}=-2V, I_C=-1A$	60		400	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-2A, I_B=-0.2A$			-0.5	V
Transition frequency	$f_T$	$V_{CE}=-5V, I_B=-0.1A$ $f = 10MHz$	50			MHz

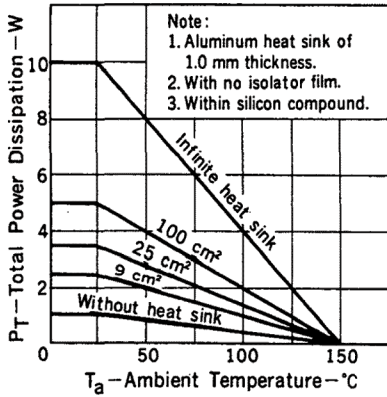
#### CLASSIFICATION OF $h_{FE(1)}$

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

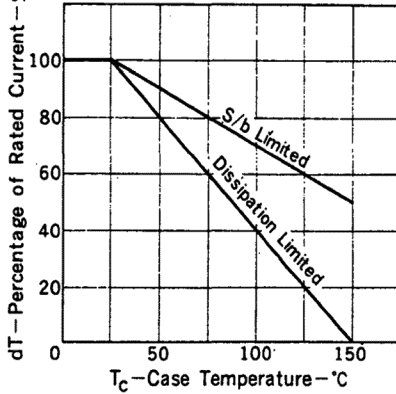
# Typical Characteristics

# 3CA8772

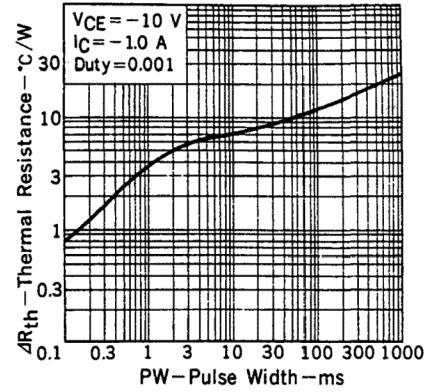
**TOTAL POWER DISSIPATION vs. AMBIENT TEMPERATURE**



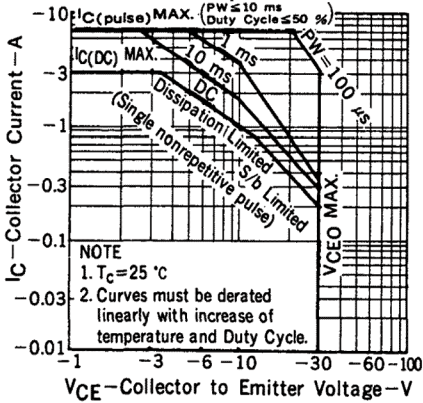
**DERATING CURVES FOR ALL TYPES**



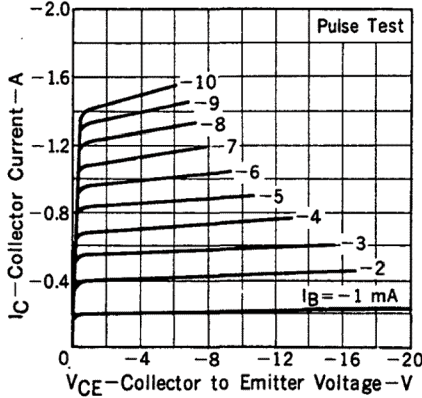
**THERMAL RESISTANCE vs. PULSE WIDTH**



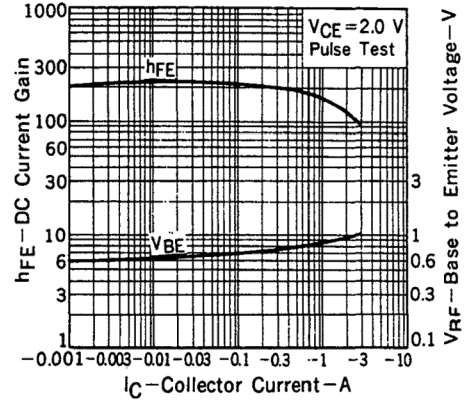
**SAFE OPERATING AREAS**



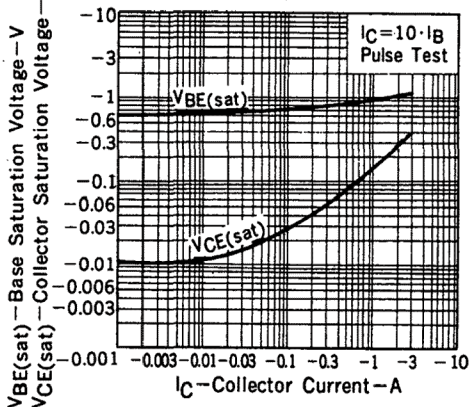
**COLLECTOR CURRENT vs. COLLECTOR TO EMITTER VOLTAGE**



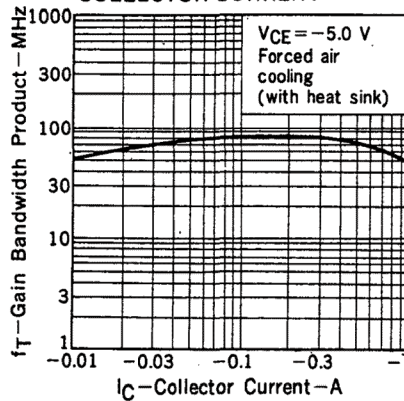
**DC CURRENT GAIN, BASE TO EMITTER VOLTAGE vs. COLLECTOR CURRENT**



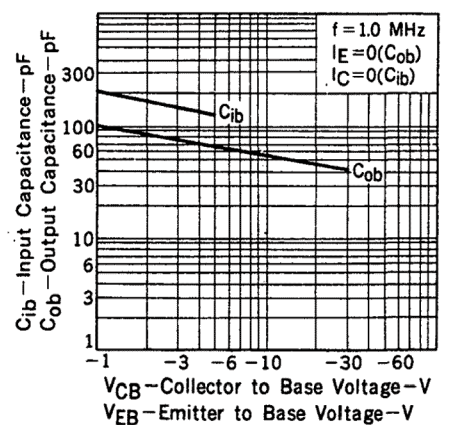
**BASE AND COLLECTOR SATURATION VOLTAGE vs. COLLECTOR CURRENT**



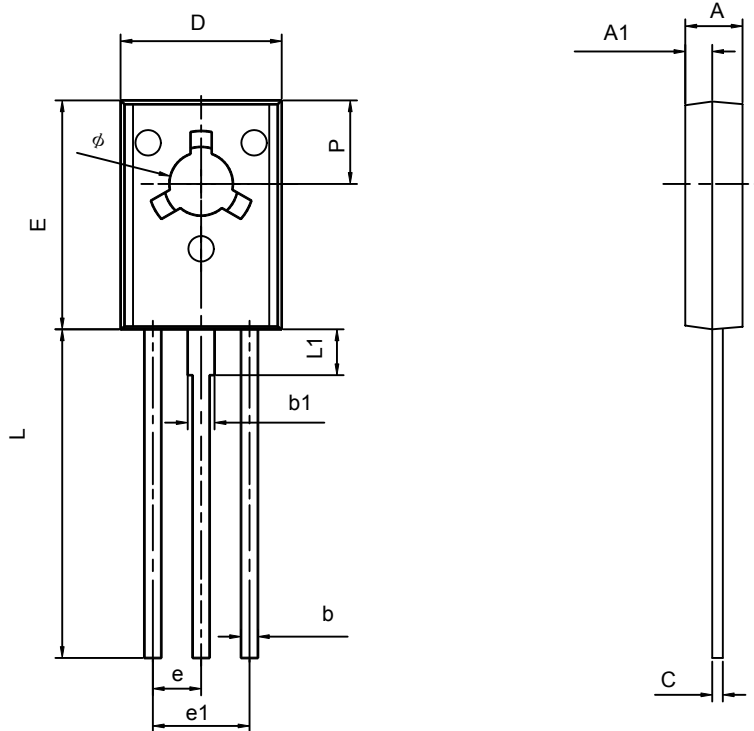
**GAIN BANDWIDTH PRODUCT vs. COLLECTOR CURRENT**



**INPUT AND OUTPUT CAPACITANCE vs. REVERSE VOLTAGE**



## TO-126 PACKAGE OUTLINE DIMENSIONS



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	2.500	2.900	0.098	0.114
A1	1.100	1.500	0.043	0.059
b	0.660	0.860	0.026	0.034
b1	1.170	1.370	0.046	0.054
c	0.450	0.600	0.018	0.024
D	7.400	7.800	0.291	0.307
E	10.600	11.000	0.417	0.433
e	2.290TYP		0.090TYP	
e1	4.480	4.680	0.176	0.184
L	15.300	15.700	0.602	0.618
L1	2.100	2.300	0.083	0.091
P	3.900	4.100	0.154	0.161
$\phi$	3.000	3.200	0.118	0.126