

### 2SD886 TRANSISTOR (NPN)

#### FEATURES

Power dissipation

$P_{CM}$ : 1 W ( $T_{amb}=25^{\circ}C$ )

Collector current

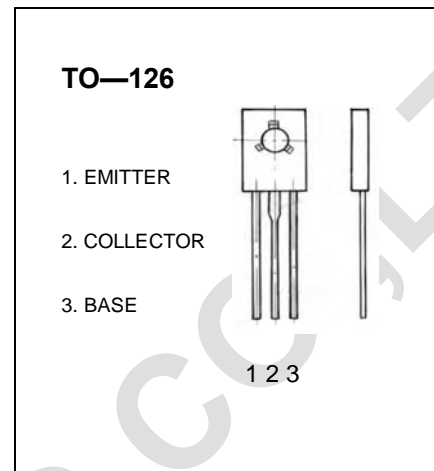
$I_{CM}$ : 3 A

Collector-base voltage

$V_{(BR)CBO}$ : 50 V

Operating and storage junction temperature range

$T_J, T_{stg}$ :  $-55^{\circ}C$  to  $+150^{\circ}C$



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

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=100\mu A, I_E=0$	50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=5mA, I_B=0$	50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=100\mu A, I_C=0$	5			V
Collector cut-off current	$I_{CBO}$	$V_{CB}=50V, I_E=0$			1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB}=3V, I_C=0$			1	$\mu A$
DC current gain	$h_{FE(1)}$	$V_{CE}=2V, I_C=20mA$	100			
	$h_{FE(2)}$	$V_{CE}=2V, I_C=1A$	100		400	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=2A, I_B=200mA$			0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=2A, I_B=200mA$			2	V
Transition frequency	$f_T$	$V_{CE}=5V, I_C=100mA$		80		MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=10V, I_E=0, f=1MHz$		45		pF

Fig.1 Static characteristics

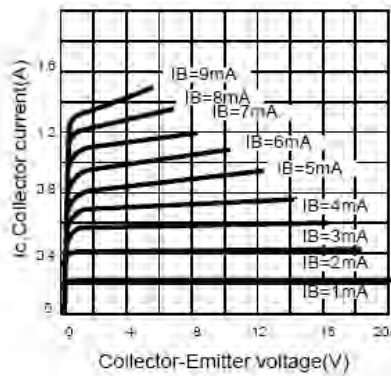


Fig.2 Derating curve of safe operating areas

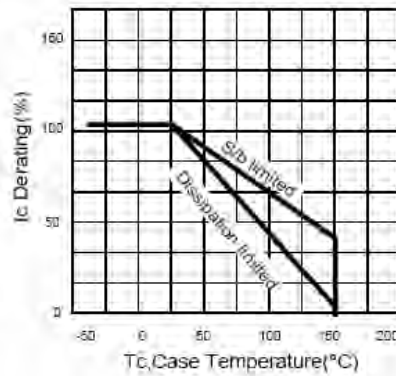


Fig.3 Power Derating

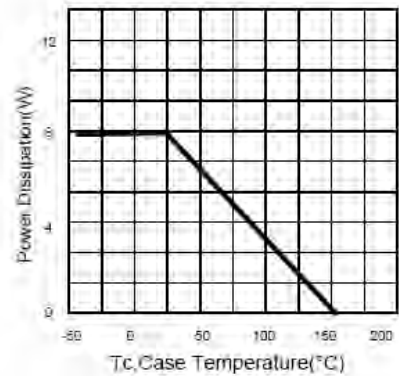


Fig.4 Collector Output capacitance

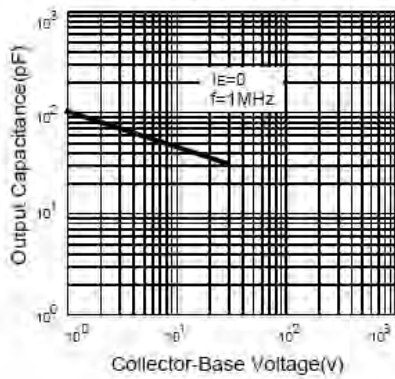


Fig.5 Current gain-bandwidth product

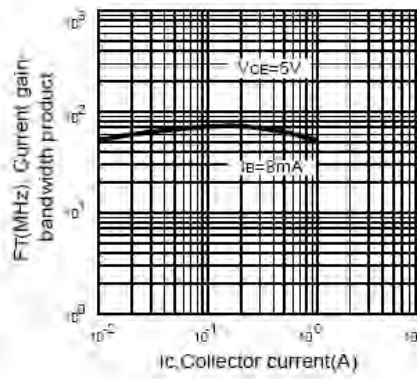


Fig.6 Safe operating area

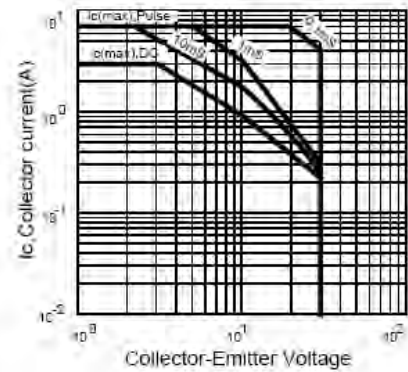


Fig.7 DC current gain

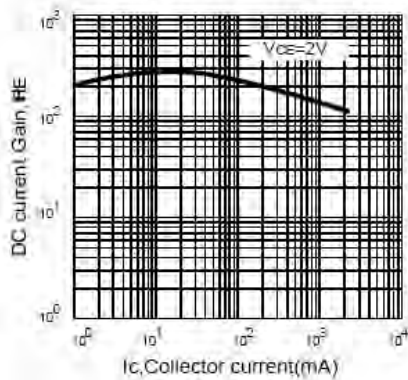


Fig.8 Saturation Voltage

