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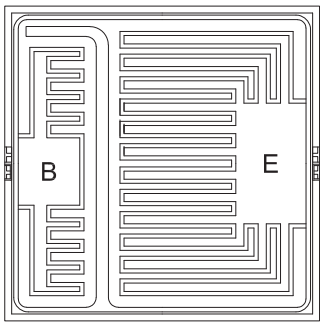
CP527

PNP - Darlington Transistor Die

10 Amp, 80 Volt

The CP527 die is a silicon PNP Darlington power transistor designed for high gain amplifier applications.



BACKSIDE COLLECTOR R0

MECHANICAL SPECIFICATIONS:

Die Size	110 x 110 MILS
Die Thickness	10.6 MILS
Base Bonding Pad Size	21 x 24 MILS
Emitter Bonding Pad Size	24 x 42 MILS
Top Side Metalization	Al – 20,000Å
Back Side Metalization	Ni/Ag – 2,000Å/10,000Å
Scribe Alley Width	4.3 mils
Wafer Diameter	4 INCHES
Gross Die Per Wafer	700

MAXIMUM RATINGS: (T_C=25°C)	**SYMBOL**		**UNITS**
Collector-Base Voltage	V_{CBO}	80	V
Collector-Emitter Voltage	V_{CEO}	80	V
Emitter-Base Voltage	V_{EBO}	5.0	V
Continuous Collector Current	I_C	10	A
Operating and Storage Junction Temperature	T_J, T_{stg}	-65 to +200	°C

ELECTRICAL CHARACTERISTICS: (T_A=25°C unless otherwise noted)

SYMBOL	**TEST CONDITIONS**	**MIN**	**MAX**	**UNITS**
I_{CEO}	V_{CE}=80V		1.0	mA
I_{EBO}	V_{EB}=5.0V		10	mA
BV_{CBO}	I_C=100μA	80		V
BV_{CEO}	I_C=3.0mA	80		V
BV_{EBO}	I_E=5.0mA	5.0		V
$V_{CE(SAT)}$	I_C=5.0A, I_B=10mA		2.0	V
$V_{BE(ON)}$	V_{CE}=3.0V, I_C=5.0A		2.8	V
h_{FE}	V_{CE}=3.0V, I_C=5.0A	1.0K	20K	
C_{ob}	V_{CB}=10V, I_E=0, f=1.0MHz		200	pF

CP527
Typical Electrical Characteristics

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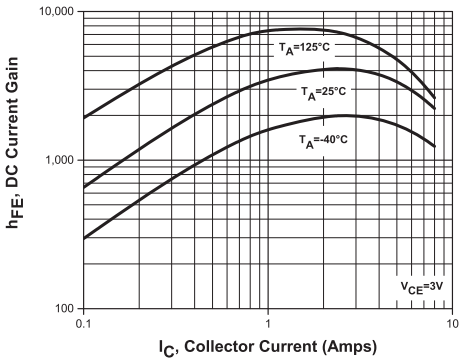
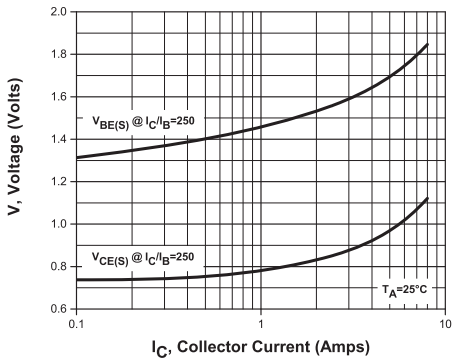
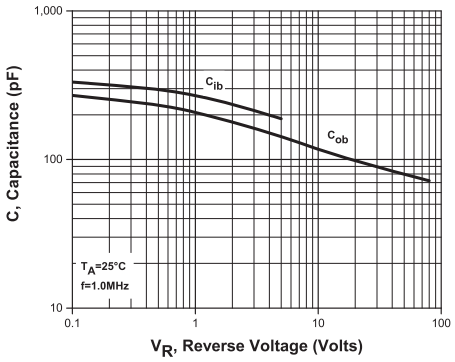
DC Current Gain



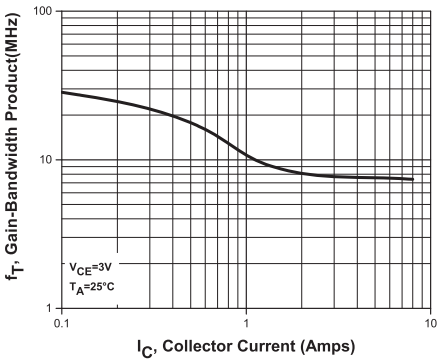
"ON" Voltage



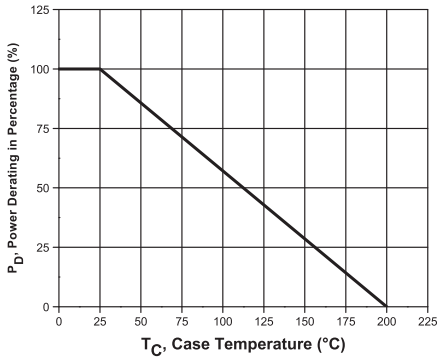
Capacitance



Current Gain-Bandwidth Product



Normalized Power Derating



R1 (21-October 2014)