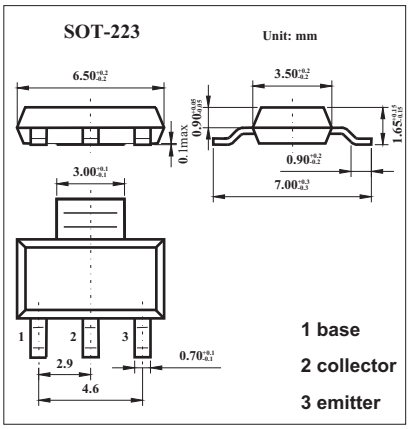
DCP55-16-13



■ Features

- Epitaxial Planar Die Construction
- Complementary PNP Type Available (DCP52)
- Ideally Suited for Automated Assembly Processes
- Ideal for Medium Power Switching or Amplification Applications

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
collector-base voltage	V_{CBO}	60	V
collector-emitter voltage	V_{CEO}	60	V
emitter-base voltage	V_{EBO}	5	V
collector current (DC)	I_C	1	A
peak collector current (t_P < 5ms)	I_{CM}	1.5	A
power dissipation	P_D	1	W
thermal resistance from junction to ambient	$R_{\theta JA}$	125	℃/W
junction temperature	T_j	150	℃
storage temperature	T_{stg}	-55 to +150	℃

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C= 0.1mA, I_E=0	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C= 10mA, I_B=0	60			
Base-emitter breakdown voltage	$V_{(BR)EBO}$	I_C= 10μA, I_E=0	5			
Collector cut-off current	I_{CBO}	I_E = 0 A; V_{CB} = 30 V			100	nA
Emitter cut-off current	I_{EBO}	I_C = 0 A; V_{EB} = 5 V			10	uA
Collector-emitter saturation voltage	V_{CE}(sat)	I_C = 500mA; I_B = 50 mA			0.5	V
Base-Emitter Turn-On Voltage	$V_{BE(ON)}$	I_C=500mA; V_{CE}=2V			1.0	
DC current gain DCP55-16	h_{FE}	I_C = 150 mA; V_{CE} = 2 V	40		250	
		I_C =500 mA; V_{CE} = 2 V	25			
		I_C = 500 mA; V_{CE} = 2 V	100		250	
Transition frequency	f_T	I_C = 50 mA; V_{CE} = 5 V; f = 100 MHz		200		MHz

DCP55-16-13

■ Typical Characteristics

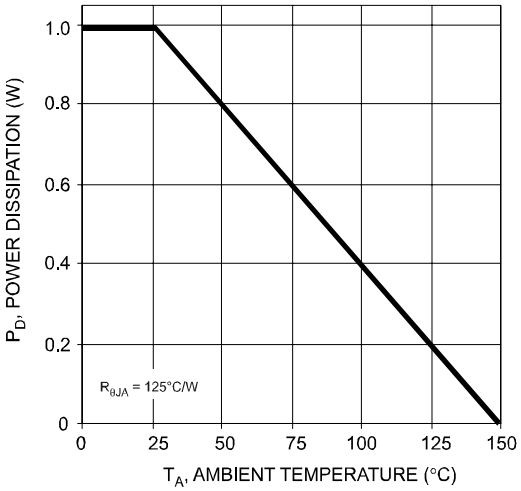


Fig. 1 Power Dissipation vs. Ambient Temperature

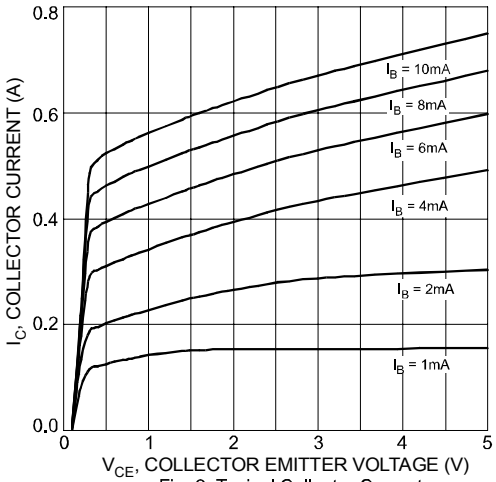


Fig. 2 Typical Collector Current vs. Collector Emitter Voltage

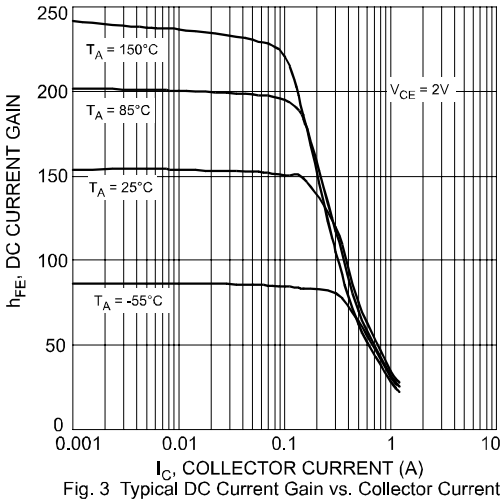


Fig. 3 Typical DC Current Gain vs. Collector Current

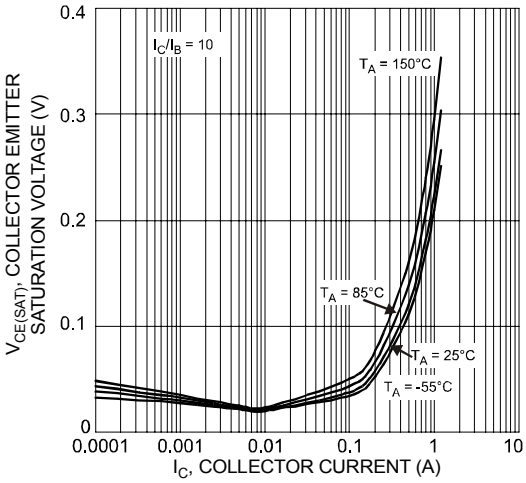


Fig. 4 Typical Collector Emitter Saturation Voltage vs. Collector Current

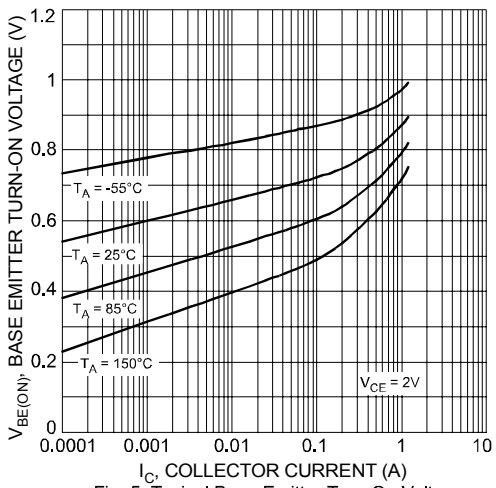


Fig. 5 Typical Base Emitter Turn-On Voltage vs. Collector Current

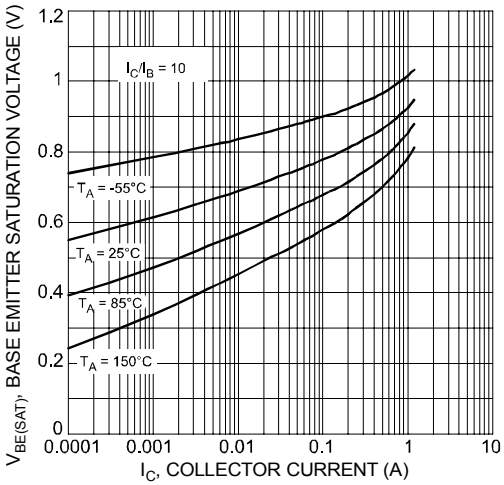


Fig. 6 Typical Base Emitter Saturation Voltage vs. Collector Current

DCP55-16-13

■ Typical Characteristics

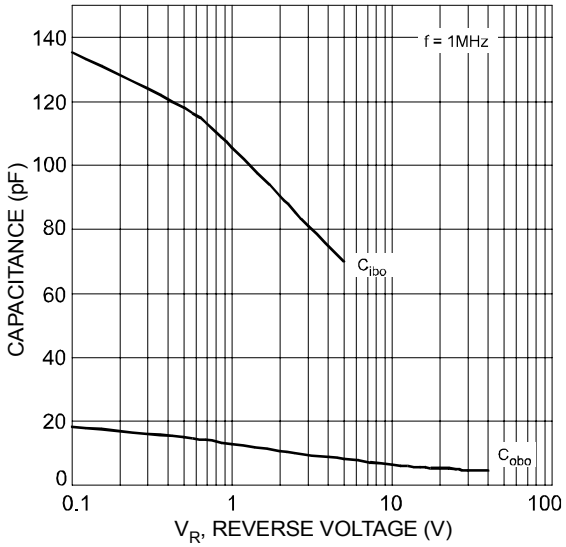


Fig. 7 Typical Capacitance Characteristics

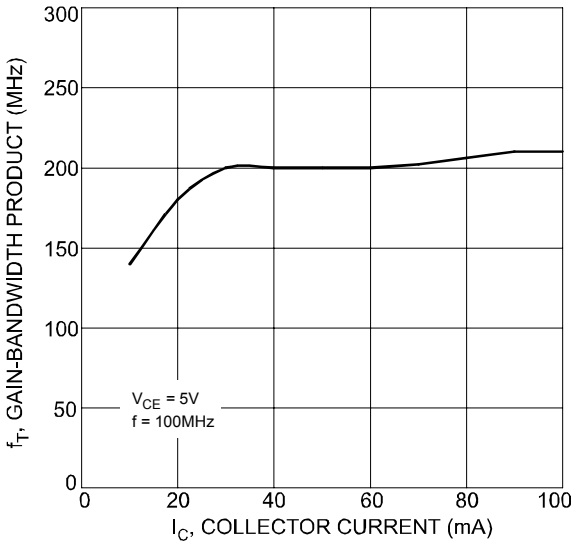


Fig. 8 Typical Gain-Bandwidth Product vs. Collector Current