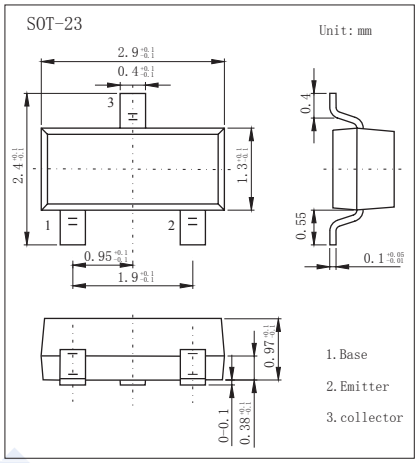
NPN Transistors

2SC3360



■ Features

- High voltage V_{CEO}=200V
- High DC Current Gain h_{FE}=90 to 450
- Complementary to 2SA1330

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V_{CBO}	200	V
Collector - Emitter Voltage	V_{CEO}	200	
Emitter - Base Voltage	V_{EBO}	5	
Collector Current - Continuous	I_C	100	mA
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_J	150	℃
Storage Temperature Range	T_{stg}	-55 to 150	

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	I_C= 100 μA, I_E= 0	200			V
Collector- emitter breakdown voltage	V_{CEO}	I_C= 1 mA, R_{BE}= ∞	200			
Emitter - base breakdown voltage	V_{EBO}	I_E= 100 μ A, I_C= 0	5			
Collector- base cut-off current	I_{CBO}	V_{CB}= 200 V , I_E= 0			0.1	uA
Emitter cut-off current	I_{EBO}	V_{EB}= 5V , I_C=0			0.1	
Collector-emitter saturation voltage *1	$V_{CE(sat)}$	I_C=50mA, I_B=5mA		0.1	0.3	V
Base - emitter saturation voltage *1	$V_{BE(sat)}$	I_C=50mA, I_B=5mA		0.8	1.2	
Base - emitter voltage *1	V_{BE}	V_{CE}= 10V, I_C= 10mA				
DC current gain *1	h_{FE}	V_{CE}= 10V, I_C= 10mA	90	200	450	
		V_{CE}= 10V, I_C= 50mA	50	200		
Turn-ON Time	t_{on}	I_C=10mA,I_{B1}=-I_{B2}=1mA,V_{CC}=10V $V_{BE(off)}$=-2.5V		0.15		us
Storage Time	t_{stg}			1.3		
Fall Time	t_f			1.6		
Collector output capacitance	C_{ob}	V_{CB}= 30V, I_E=0,f=1MHz		2.8		pF
Transition frequency	f_T	V_{CE}= 10V, I_C= 10mA		160		MHz

*1.pulsed:PW ⩽ 350us,Duty Cycle ⩽ 2%

■ Classification of $h_{fe(1)}$

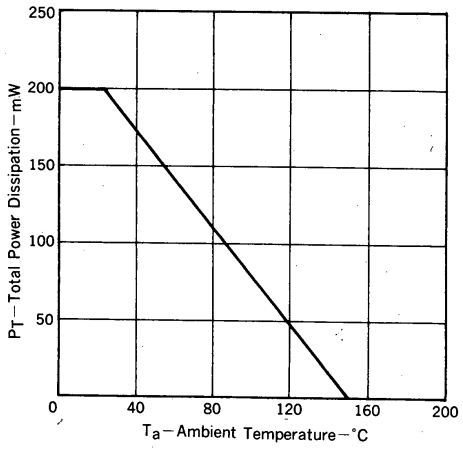
Type	2SC3360-N15	2SC3360-N16	2SC3360-N17
Range	90-180	135-270	200-450
Marking	N15	N16	N17

NPN Transistors

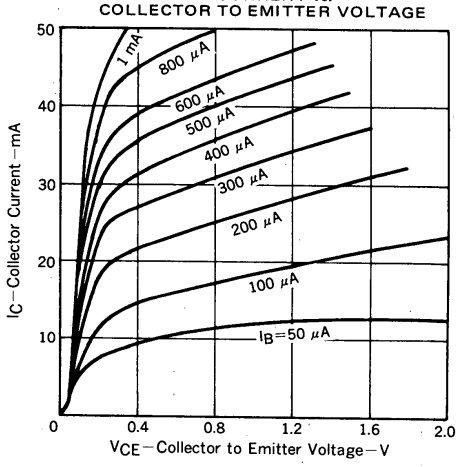
2SC3360

■ Typical Characterisitics

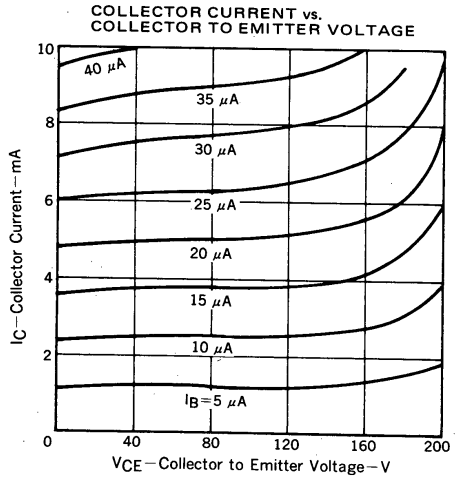
TOTAL POWER DISSIPATION vs. AMBIENT TEMPERATURE



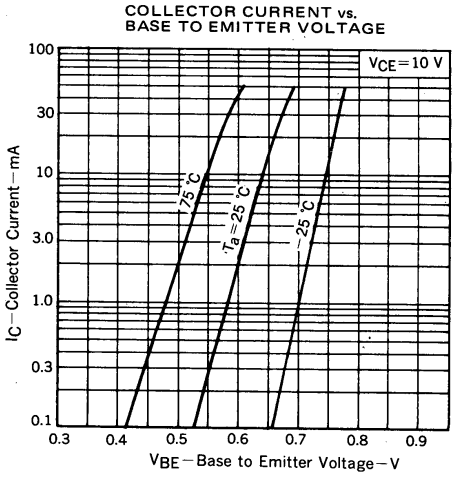
COLLECTOR CURRENT vs. COLLECTOR TO EMITTER VOLTAGE



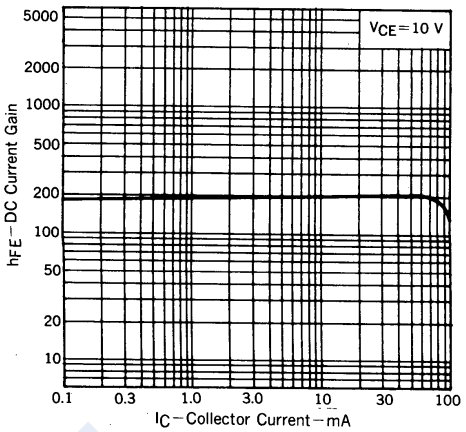
COLLECTOR CURRENT vs. COLLECTOR TO EMITTER VOLTAGE



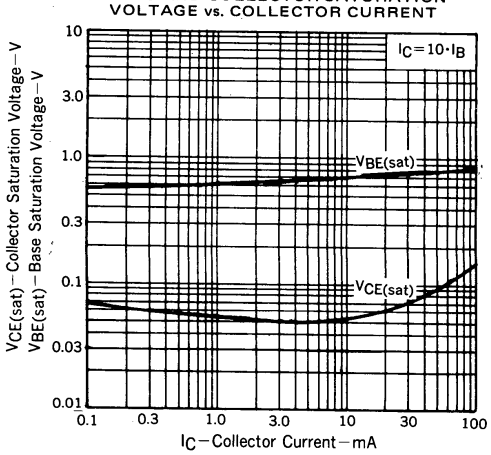
COLLECTOR CURRENT vs. BASE TO EMITTER VOLTAGE



DC CURRENT GAIN vs. COLLECTOR CURRENT



BASE AND COLLECTOR SATURATION VOLTAGE vs. COLLECTOR CURRENT

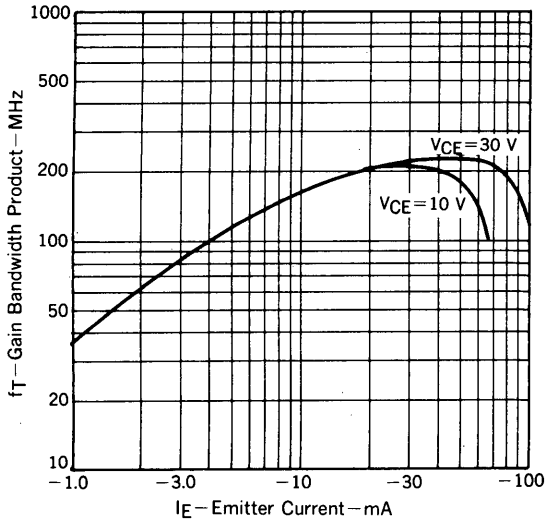


NPN Transistors

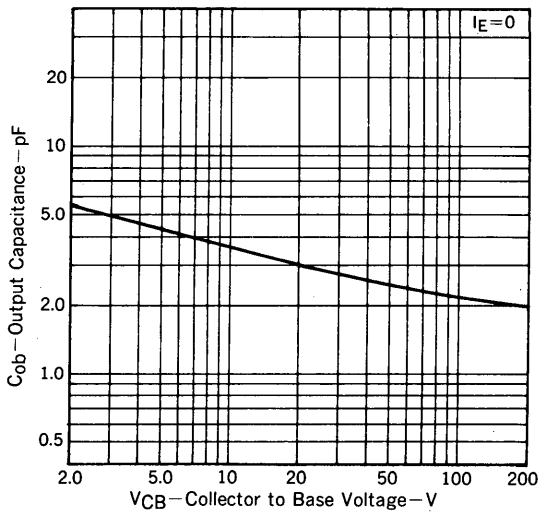
2SC3360

■ Typical Characterisitics

GAIN BANDWIDTH PRODUCT vs.
EMITTER CURRENT



OUTPUT CAPACITANCE vs.
COLLECTOR TO BASE VOLTAGE



SWITCHING TIME vs.
COLLECTOR CURRENT