MICRO ELECTRONICS

BC635 THRU' BC640

COMPLEMENTARY
SILICON
TRANSISTORS

BC635, BC637, BC639 (NPN) and BC636, BC638, BC640 (PNP) are complementary silicon epitaxial planar transistors for AF driver stages and amplifier applications up to 1A.

TO-92

ABSOLUTE MAXIMUM RATINGS		BC635 BC636	BC637 BC638	BC639 BC640
Collector-Emitter Voltage	V_{CEO}	45V	60V	80V
Collector Current-Continuous	I_C		1A	
Collector Current	$I_{C(max)}$		1.5A	
Total Power Dissipation @ $T_A \leq 25^oC$ $T_C \leq 25^oC$	P_{tot}		625mW 1.5W	
Operating Junction & Storage Temperature	T_j, T_{stg}		-55 to +150°C	

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise specified)

PARAMETER	SYMBOL	MIN	MAX	UNIT	TEST CONDITIONS
Collector-Base Breakdown Voltage	BV_{CBO}			V	I_C=1mA I_E=0
BC635, BC636		45			
BC637, BC638		60			
BC639, BC640		80			
Collector-Emitter Breakdown Voltage	LV_{CEO}			V	I_C=20mA I_B=0*
BC635, BC636		45			
BC637, BC638		60			
BC639, BC640		80			
Emitter-Base Breakdwon Voltage	BV_{EBO}	5		V	I_E=1μA I_C=0
Collector Cutoff Current	I_{CBO}		100	nA	V_{CB}=30V I_E=0
			10	μA	V_{CB}=30V T_A=125°C
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$		0.5	V	I_C=500mA I_B=50mA*
Base-Emitter Voltage	V_{BE}		1.0	V	I_C=500mA V_{CE}=2V*
D.C. Current Gain BC635, BC636	H_{FE}	40	250		I_C=150mA V_{CE}=2V*
BC637, BC638		40	160		
BC639, BC640		40	160		
All types		25			I_C=500mA V_{CE}=2V*
Current Gain-Bandwidth Product	f_T	50		MHz	I_C=50mA V_{CE}=5V f=20MHz

*Pulse Test: Pulse Width=300μs, Duty Cycle=1%.

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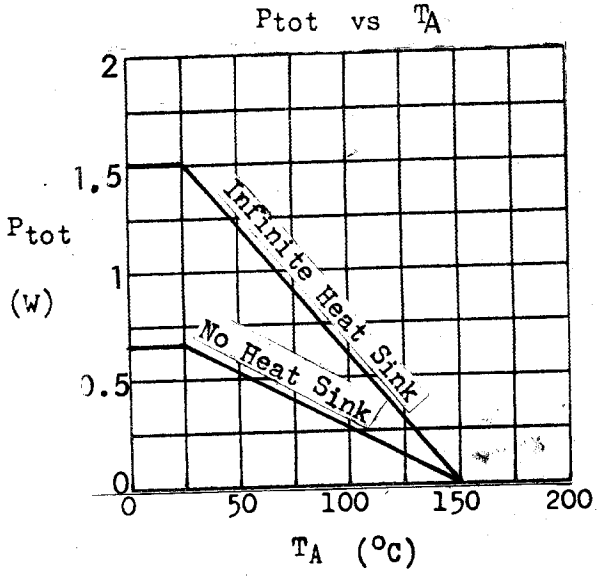
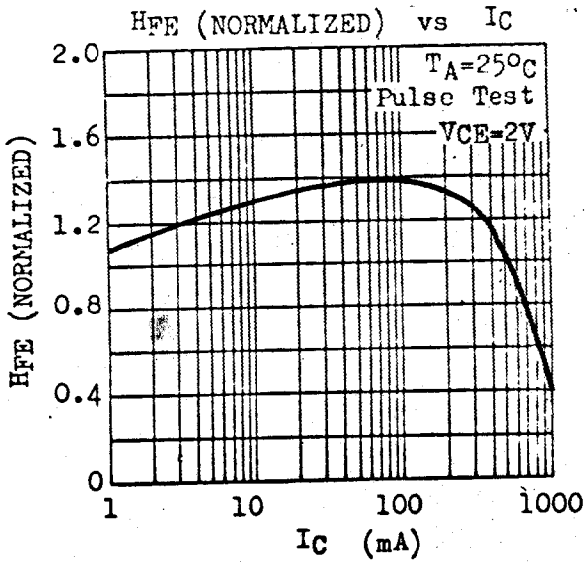
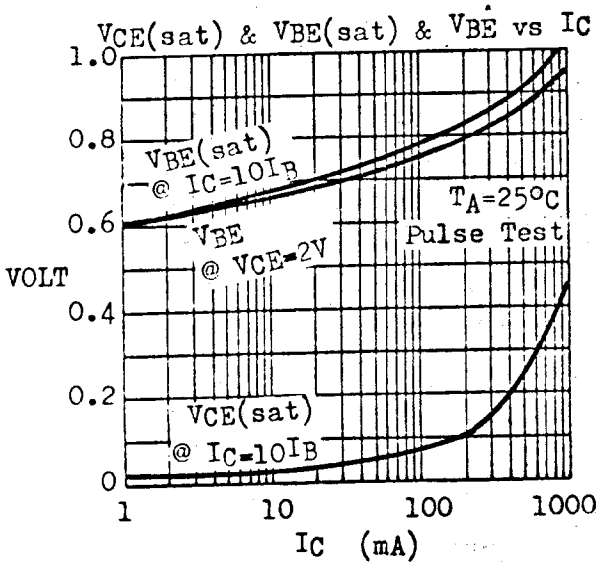
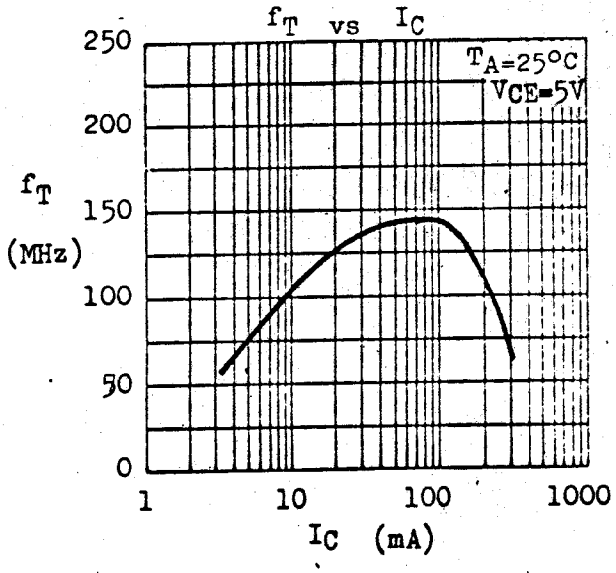
TYPICAL CHARACTERISTICS









* HFE Grouping @ IC=150mA VCE=2V

Grouping -6 40-100

-10 63-160

-16 100-250