

X60015

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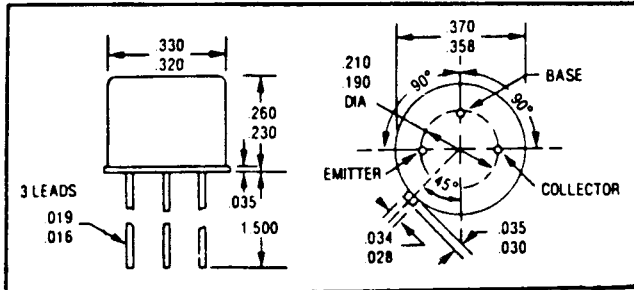
SFT 8500

2 AMP

HIGH VOLTAGE NPN TRANSISTOR

1000 VOLTS

CASE STYLE W JEDEC TO-5



FEATURES

- BV_{CEO} 600 VOLTS MIN.
- LOW V_{CE} (SAT) 0.8V
- 175°C OPERATING, GOLD EUTECTIC DIE ATTACH
- LINEAR GAIN FROM 10mA TO 500mA
- HIGH SPEED
- GLASS PASSIVATED
- REPLACES PRODUCT PREVIOUSLY AVAILABLE IN TO-3 ONLY

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector - Emitter Voltage	V _{CEO}	600	Volts
R _{BE} - 1K Ohms	V _{CER}	1000	Volts
Collector - Base Voltage	V _{CBO}	1000	Volts
Emitter - Base Voltage	V _{EBO}	6	Volts
Collector Current	I _C	2	Amps
Base Current	I _B	.75	mAmps
Total Device Dissipation @ T _C = 25°C @ T _A = 25°C Unheatsunk	P _D	10 1.0	Watts Watts
Operating and Storage Temperature	T _J , T _{stg}	-65 to +175°	C

THERMAL CHARACTERISTICS

Characteristics	Symbol	Value	Unit
Thermal Resistance, Junction to Case	R _{θJC} , (R _{θJA})	15, (150)	°C W

ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Min.	Max.	Unit
Collector - Emitter Breakdown Voltage* (I _C = 10 mA _{dc}) (I _C = 20 uA _{dc} , R _{BE} = 1K ohms)	BV _{CEO} * BV _{CER} *	600 1000		V _{dc} V _{dc}
Collector - Base Breakdown Voltage (I _C = 20 uA _{dc})	BV _{CBO}	1000		V _{dc}
Emitter - Base Breakdown Voltage (I _E = 20 uA _{dc})	BV _{EBO}	6		V _{dc}

ELECTRICAL CHARACTERISTICS

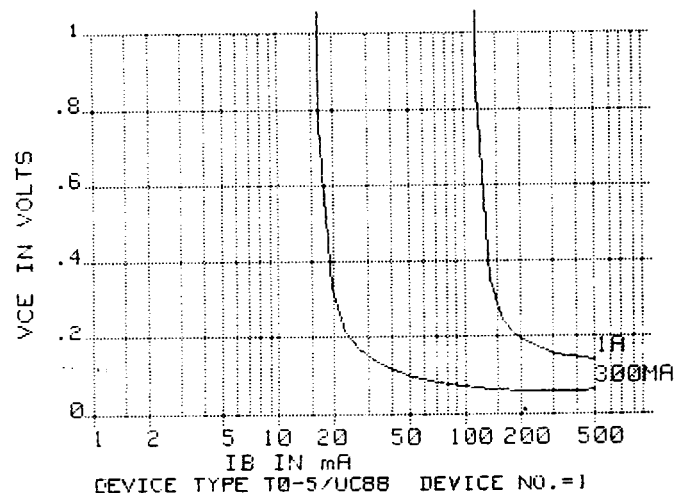
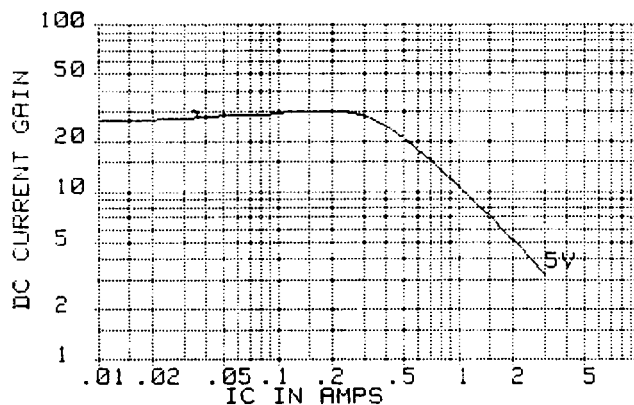
Characteristics	Symbol	Min.	Max.	Unit
Collector Cutoff Current ($V_{CE} = 800V$)	I_{CES}		10	μA_{dc}
Collector Cutoff Current ($V_{CB} = 800V$)	I_{CBO}		10	μA_{dc}
Emitter Cutoff Current ($V_{EB} = 4V$)	I_{EBO}		10	μA_{dc}
DC Current Gain* ($I_C = 20\text{ m}$ Adc. $V_{CE} = 5\text{ Vdc}$) ($I_C = 100\text{ m}$ Adc. $V_{CE} = 5\text{ Vdc}$) ($I_C = 500\text{ m}$ Adc. $V_{CE} = 5\text{ Vdc}$)	h_{FE}	20 20 15	100 100 100	
Collector - Emitter Saturation Voltage* ($I_C = 300\text{ m}$ Adc. $I_B = 30\text{ m}$ Adc.) ($I_C = 1\text{ A}$ Adc. $I_B = 300\text{ m}$ Adc.)	$V_{CE(SAT)}$		0.8 1.0	Vdc Vdc
Base - Emitter Saturation Voltage* $I_C = 1\text{ A}$ Adc, $I_B = 200\text{ mA}_{dc}$	$V_{BE(SAT)}$		1.1	Vdc
Current - Gain - Bandwith Product ($I_C = 100\text{ m}$ Adc. $V_{CE} = 5\text{ Vdc}$ f = 1 MHz)	f_T	30		MHz
Output Capacitance ($V_{CB} = 20\text{ Vdc}$, $I_E = 0$, f = 1 MHz)	C_{ob}		25	

SWITCHING TIMES

Delay Time	(V _{CC} = 125 Vdc. $I_C = 2\text{ A}$ Adc. $I_{B1} = I_{B2} = .2A$)	t_d		150	ns
Rise Time		t_r		200	ns
Storage Time		t_s		3000	ns
Fall Time		t_f		300	ns

*Pulse Test: Pulse width = 300 μs , DutyCycle = 2%

TYPICAL OPERATING CURVES



SSD II SOLID STATE DEVICES, INC.