

X00137

SFT2010 SFT2012 SFT2014
200 AMP
HIGH ENERGY NPN TRANSISTOR
 V_{CEO} 100, 120, 140 VOLTS

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CASE STYLE R**TO-3 WITH .060 PINS****FEATURES**

- BVCBO 250 VOLTS MIN
- 600 WATTS POWER DISSIPATION
- EXCELLENT SOA CURVE
- E_s/b OF 800mJ
- GAIN OF OVER 5 AT 200 AMPS
- HIGH REL CONSTRUCTION INCLUDING GOLD EUTECTIC DIE MOUNTING, ALUMINUM WIRING
- PLANAR CHIP CONSTRUCTION WITH LOW LEAKAGE AND VERY FAST SWITCHING

MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector - Emitter Voltage SFT2010 SFT2012 SFT2014	V_{CEO}	100 120 140	Volts
Collector - Base Voltage	V_{CBO}	250	Volts
Emitter - Base Voltage	V_{EBO}	8	Volts
Collector Current	I_C	200	Amps
Base Current	I_B	75	Amps
Total Device Dissipation @ $T_C = 50^\circ C$	P_D	600	Watts
Derate above $50^\circ C$		4	W/ $^\circ C$
Operating and Storage Temperature	T_j, T_{stg}	-65 to 200	$^\circ C$

THERMAL CHARACTERISTICS

Characteristics	Symbol	Value	Unit
Thermal Resistance, Junction to Case	$R_{\theta JC}$	0.25	$^\circ C/W$

ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Min.	Max.	Unit
Collector - Emitter Breakdown Voltage* $I_C = 200 \text{ mA dc}$ SFT2010 SFT2012 SFT2014	BV_{CEO}	100 120 140		Vdc
Collector - Base Breakdown Voltage $I_C = 100 \text{ uA dc}$	BV_{CBO}	250		Vdc
Emitter - Base Breakdown Voltage $I_E = 100 \text{ uA dc}$	BV_{EBO}	8		Vdc

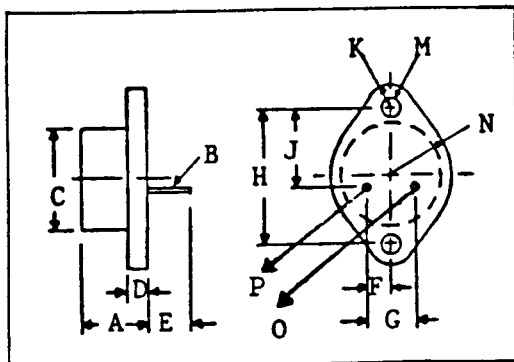
NOTE: All specifications subject to change without notice.

ELECTRICAL CHARACTERISTICS

Characteristics	Symbol	Min.	Max.	Unit
Collector Cutoff Current ($V_{CB} = 250 \text{ Vdc}$)	I_{CBO}		10	μAdc
Emitter Cutoff Current ($V_{EB} = 7 \text{ Vdc}$)	I_{EBO}		10	μAdc
DC Current Gain* ($I_C = 10 \text{ Adc}, V_{CE} = 2 \text{ Vdc}$) ($I_C = 100 \text{ Adc}, V_{CE} = 5 \text{ Vdc}$) ($I_C = 200 \text{ Adc}, V_{CE} = 5 \text{ Vdc}$)	h_{FE}	40 30 5		
Collector - Emitter Saturation Voltage* ($I_C = 120 \text{ Adc}, I_B = 12 \text{ Adc}$) ($I_C = 200 \text{ Adc}, I_B = 30 \text{ Adc}$)	$V_{CE(SAT)}$		2.0 3.0	Vdc
Base - Emitter Saturation Voltage* ($I_C = 120 \text{ Adc}, I_B = 12 \text{ Adc}$)	$V_{BE(SAT)}$		2.2	Vdc
Current - Gain - Bandwith Product ($I_C = 1.0 \text{ Adc}, V_{CE} = 10 \text{ Vdc}, f = 10 \text{ MHz}$)	f_T	30		MHz
Output Capacitance ($V_{CB} = 10 \text{ Vdc}, I_E = 0, f = 1 \text{ MHz}$)	C_{ob}		1200	pf
RB SOA ($I_B = 1 \text{ Adc}, R_{B1} = R_{B2} = 20 \text{ ohms}$) ($V_{BE(off)} = 2.0 \text{ Vdc}, L = 1.0 \text{ mH}$)	$E_{S/b}$	800		mJ
FB SOA ($V_{CE} = 20 \text{ Vdc}, I_C = 30 \text{ Adc}$) ($V_{CE} = 100 \text{ Vdc}, I_C = 0.75 \text{ Adc}$)	$I_{S/b}$	1 1		sec
ON TIME	t_{on}		800	ns
Storage Time	t_s		1500	ns
Fall Time	t_f		400	ns

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

PHYSICAL DIMENSIONS



KEY TO DIMENSIONS:

(Inches)

A	=	.250 - .450
B	=	.057 - .062
C	=	.875 MAX.
D	=	.135 MAX.
E	=	.312 MIN.
F	=	.205 - .225
G	=	.420 - .440
H	=	1.177 - 1.197
J	=	.655 - .675
K	=	.188 MAX.
M	=	.151 - .161
N	=	.525 MAX.
O	=	BASE
P	=	EMITTER

SSDI SOLID STATE DEVICES, INC.