



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, CA 90638
 Phone: (562) 404-7855 * Fax: (562) 404-1773
 ssdi@ssdi-power.com * www.ssdi-power.com

SFT6032

SFT6033

Electrical Characteristics		Symbol	Min	Max	Units
Collector – Emitter Blocking Voltage *	(I _C = 200 mA) SFT6032	BV_{CEO}	90	—	Volts
	SFT6033		120	—	
	(I _C = 200 mA, R _{BE} = 50 Ω) SFT6032	BV_{CER}	110	—	
	SFT6033		140	—	
Collector – Emitter Blocking Voltage *	(I _C = 200 mA, V _{BE} = -1.5 V) SFT6032	BV_{CEX}	120	—	Volts
	SFT6033		150	—	
Collector Cutoff Current	(V _{CE} = 80 V)	I_{CEO}	—	1	mA
Collector Cutoff Current	(V _{CB} = 120 V) SFT6032	I_{CBO}	—	1	mA
	(V _{CB} = 150 V) SFT6033		—	1	
Emitter Cutoff Current	(V _{EB} = 7 V)	I_{EBO}	—	1	mA
Collector Cutoff Current	T _A = 25°C (V _{CE} = 110 V, V _{BE} = 1.5 V) SFT6032	I_{CEX}	—	1	mA
	T _A = 25°C (V _{CE} = 135 V, V _{BE} = 1.5 V) SFT6033		—	1	
	T _A = 150°C (V _{CE} = 100 V, V _{BE} = 1.5 V) SFT6032		—	15	
	T _A = 150°C (V _{CE} = 100 V, V _{BE} = 1.5 V) SFT6033		—	10	
DC Current Gain *	I _C = 50 A, V _{CE} = 2.6 V, SFT6032	h_{FE}	10	50	
	I _C = 40 A, V _{CE} = 2 V, SFT6033		10	50	
	I _C = 50 A, V _{CE} = 2.6 V, T _A = -55°C SFT6032		5	—	
	I _C = 40 A, V _{CE} = 2 V, T _A = -55°C, SFT6033		5	—	
Small Signal Common-Emitter Forward Current Transfer Ratio	(I _C = 2 A, V _{CE} = 10 V, f = 5 MHz)	h_{fe}	10	40	
Collector-Emitter Saturation Voltage *	(I _C = 50 A, I _B = 5 A) SFT6032	V_{CE(SAT)}	—	1.3	Volts
	(I _C = 40 A, I _B = 4 A) SFT6033		—	1.0	
Base-Emitter Saturation Voltage *	(I _C = 50 A, I _B = 5 A) SFT6032	V_{BE(SAT)}	—	2.5	Volts
	(I _C = 40 A, I _B = 4 A) SFT6033		—	2.5	
Output Capacitance	V _{CB} = 10 V, I _E = 0 A, f = 1.0MHz	C_{ob}	—	1000	pF
Safe Operating Area	V _{CE} = 2.8 V, I _C = 50 A, t = 1 s, SFT6032	SOA1a			
	V _{CE} = 3.5 V, I _C = 40 A, t = 1 s, SFT6033	SOA1b			
	V _{CE} = 24 V, I _C = 5.8 A, t = 1 s	SOA2			
	V _{CE} = 40 V, I _C = 0.9 A, t = 1 s	SOA3			
	V _{CE} = 90 V, I _C = 0.18 A, t = 1 s, SFT6032	SOA4a			
	V _{CE} = 120 V, I _C = 0.10 A, t = 1 s, SFT6033	SOA4b			
Turn-on Time	(V _{CC} = 30 V, I _C = 50.0 A, I _{B1} = I _{B2} = 5.0 A) SFT6032	t_(on)	—	500	ns
Turn-off Time	(V _{CC} = 30 V, I _C = 40.0 A, I _{B1} = I _{B2} = 4.0 A) SFT6033	t_(off)	—	2.0	μs

NOTES: * Pulse Test: Pulse Width = 300μsec, Duty Cycle = 2%

1/ For Ordering Information, Price, and Availability Contact Factory. 4/ Up and Down Bend Configurations are Available for 'M' (TO-254) Packages Only.

2/ Screening per MIL-PRF-19500 5/ Unless Otherwise Specified, All Electrical Characteristics @25°C.

3/ For Package Outlines Contact Factory.

Available Part Numbers:
 SFT6032/3
 SFT6033/3

PIN ASSIGNMENT (Standard)			
Package	Collector	Emitter	Base
TO-3 (/3)	Case	Pin 2	Pin 3