"BIG IDEAS IN BIG POWER"

PowerTech

100 AMPERES

PT-3520

ULTRA FAST SWITCHING SILICON NPN TRANSISTOR

ABSOLUTE MAXIMUM RATINGS	SYMBOL	PT-3520
Collector-Base Voltage	V_{CBO}	300V
Collector-Emitter Voltage	V_{CEO}	200V
Emitter-Base Voltage	V_{EBO}	10V
Peak Collector Current	I_{CM}*	100A
D. C. Collector Current	I_C	50A
Power Dissipation at 25°C Case Temperature	P_D	325W
Power Dissipation at 100°C Case Temperature	P_D	200W
Operating Junction Temperature Range	T_J	−65 to 200°C
Storage Temperature Range	T_A	−65 to 200°C
Package:		TO-63
Thermal Resistance	θ_{JC}	0.5°C/W

ELECTRICAL SPECIFICATIONS (at 25°C unless otherwise noted)

TEST	SYMBOL	MIN.	MAX.	UNITS	TEST CONDITIONS
D. C. Current Gain*	h_{FE}	20			I_C=50A, V_{CE}=4V
D. C. Current Gain*	h_{FE}	10			I_C=100A, V_{CE}=4V
Collector Saturation Voltage*	$V_{CE(sat)}$		0.6	V	I_C=50A, I_B=5.0A
Collector Saturation Voltage*	$V_{CE(sat)}$		0.75	V	I_C=100A, I_B=11A
Base Emitter Voltage*	V_{BE}		1.0	V	I_C=50A, V_{CE}=5V
Base Emitter Voltage*	V_{BE}		1.5	V	I_C=100A, V_{CE}=5V
Collector-Emitter Breakdown Voltage*	$V_{CEO(sus)}$	200		V	I_C=50mA, I_B=0
Collector Cutoff Current	I_{CBO}		2	mA	V_{CB}=300V, I_{EB}=0
Collector Cutoff Current @ 150°C	I_{CBO}		10	mA	V_{CB}=200V, I_{EB}=0
Emitter Cutoff Current	I_{EBO}		5	mA	V_{EB}=10V, I_{CB}=0
Gain Bandwidth Product	f_t	10		MHz	I_C=5A, V_{CE}=10V
Collector Capacitance	C_{obo}		400	pF.	V_{CB}=10V, f=1 MHz
Switching Speed (Typ)	t_r		0.5	μs	I_C=50A
(PowerTech Test Circuit)	t_s		1.0	μs	I_{B1}=I_{B2}=5A
	t_f		0.5	μs	

*PW ≤ 300 μs, D.C. ≤2%

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