

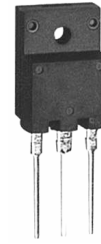


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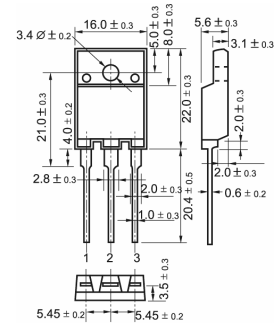
SILICON DIFUSED POWER TRANSISTOR

GENERAL DESCRIPTION

High voltage, high-speed switching npn transistors in a plastic envelope, primarily for use in horizontal deflection circuits of colour television receivers



TO-3PML



QUICK REFERENCE DATA

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V_{CESM}	Collector-emitter voltage peak value	$V_{BE} = 0V$		1500	V
V_{CEO}	Collector-emitter voltage (open base)			600	V
I_C	Collector current (DC)			8	A
I_{CM}	Collector current peak value			16	A
P_{tot}	Total power dissipation	$T_{mb} \leq 25^\circ C$		70	W
V_{CEsat}	Collector-emitter saturation voltage	$I_C = 6.0A; I_B = 1.5A$		5.0	V
I_{csat}	Collector saturation current	$f = 16KHz$			A
V_F	Diode forward voltage				V
t_f	Fall time	$I_C=4A, I_{B1}=-1/2I_{B2}=1.2A, V_{CC}=100V$		1.0	μs

LIMITING VALUES

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
V_{CESM}	Collector-emitter voltage peak value	$V_{BE} = 0V$		1500	V
V_{CEO}	Collector-emitter voltage (open base)			600	V
V_{EBO}	Emitter-base voltage (open collector)			5	V
I_C	Collector current (DC)			8	A
I_B	Base current (DC)			2	A
I_{BM}	Base current peak value			4	A
P_{tot}	Total power dissipation	$T_{mb} \leq 25^\circ C$		70	W
T_{stn}	Storage temperature		-55	150	$^\circ C$
T_j	Junction temperature			150	$^\circ C$

ELECTRICAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	MIN	MAX	UNIT
I_{CE}	Collector-emitter cut-off current	$V_{BE} = 0V; V_{CE} = V_{CESMmax}$		1.0	mA
I_{CES}		$V_{BE} = 0V; V_{CE} = V_{CESMmax}$		2.0	mA
$V_{CEOsust}$	Collector-emitter sustaining voltage	$T_j = 125^\circ C$ $I_B = 0A; I_C = 100mA$ $L = 25mH$			V
V_{CEsat}	Collector-emitter saturation voltages	$I_C = 6.0A; I_B = 1.5A$		5.0	V
V_{BESat}	Base-emitter saturation voltage	$I_C = 6.0A; I_B = 1.5A$		1.5	V
h_{FE}	DC current gain	$I_C = 1.0A; V_{CE} = 5V$	10	40	
V_F	Diode forward voltage				V
f_T	Transition frequency at $f = 1MHz$	$I_C = 0.1A; V_{CE} = 10V$	3		MHz
C_c	Collector capacitance at $f = 1MHz$	$V_{CB} = 10V$			pF
t_s	Switching times (16KHz line deflection circuit)	$I_C=4A, I_{B1}=-1/2I_{B2}=1.2A, V_{CC}=100V$			μs
t_f	Turn-off storage time Turn-off fall time	$I_C=4A, I_{B1}=-1/2I_{B2}=1.2A, V_{CC}=100V$		1.0	μs