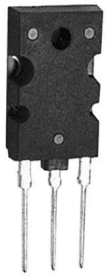
2SD1427 Silicon Diffused Power Transistor

GENERAL DESCRIPTION

Highvoltage,high-speed switching npn transistors in a plastic envelope with integrated efficiency diode,primarily for use in horizontal deflection circuites of colour television receivers



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QUICK REFERENCE DATA

SYMBOL	PARAMETER	CONDITIONS	TYP	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)		-	5	A
I_{CM}	Collector current peak value		-	10	A
P_{tot}	Total power dissipation	T_{mb}≤25℃	-	80	W
V_{CEsat}	Collector-emitter saturation voltage	I_C = 4.0A; I_B = 0.8A	-	5	V
I_{csat}	Collector saturation current	f = 16KHz	-	-	A
V_F	Diode forward voltage	I_F = 4.0A	1.2	1.5	V
t_f	Fall time	I_{Csat} = 4.0A; f = 16KHz	0.5	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
I_C	Collector current (DC)		-	5	A
I_{CM}	Collector current peak value		-	10	A
I_B	Base current (DC)		-	-	A
I_{BM}	Base current peak value		-	-	A
P_{tot}	Total power dissipation	Tmb≤25℃	-	80	W
T_{stg}	Storage temperature		-55	150	℃
T_j	Junction temperature		-	150	℃

ELECTRICAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	TYP	MAX	UNIT
I_{CE}	Collector cut-off current	V_{BE} = 0V; V_{CE} = $V_{CESMmax}$	-	1.0	mA
I_{CES}		V_{BE} = 0V; V_{CE} = $V_{CESMmax}$ T_j = 125℃	-	2.0	mA
$V_{CEOsust}$	Collector-emitter sustaining voltage	I_B = 0A; I_C = 100mA L = 25mH	-		V
V_{CEsat}	Collector-emitter saturation voltages	I_C = 4.0A; I_B = 0.8A	-	5.0	V
V_{BEsat}	Base-emitter satuation voltage	I_C = 4.0A; I_B = 0.8A	-	1.5	V
h_{FE}	DC current gain	I_C = 1.0A; V_{CE} = 5V	8		
V_F	Diode forward voltage	I_F = 4.0A	1.2	1.5	V
f_T	Transition frequency at f = 5MHz	I_C = 0.1A; V_{CE} = 10V	2	-	MHz
C_c	Collector capacitance at f = 1MHz	V_{CB} = 10V	80	-	pF
t_s	Switching times(16KHz line deflecton circuit)	I_{Csat} = 4.0A; L_c=1mH; C_{fb} = 4nF	-	-	μs
t_f	Turn-off storage time Turn-off fall time	$I_{B(end)}$ = 0.8A; I_C = 4.0A ; V_{CC} = 105V	0.5	1.0	μs

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