

ELECTRICAL CHARACTERISTICS ($T_{case} = 25^{\circ}C$ unless otherwise stated)

Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CBO} Collector cut-off current ($I_E = 0$)	BDS16 $V_{CB} = 120V$ BDS17 $V_{CB} = 150V$			20 20	μA
I_{CEO} Collector cut-off current ($I_B = 0$)	BDS16 $V_{CE} = 60V$			0.1 0.1	mA
I_{EBO} Emitter cut-off current ($I_C = 0$)	BDS17 $V_{CE} = 75V$ $V_{EB} = 5V$			10	μA
$V_{CEO(sus)*}$ Collector - Emitter sustaining voltage ($I_B = 0$)	BDS16 $I_C = 100mA$ BDS17	120 150			V
$V_{CE(sat)*}$ Collector - Emitter saturation voltage	$I_C = 4A$ $I_B = 0.4A$			1.5	V
	$I_C = 0.5A$ $I_B = 0.05A$			0.4	V
$V_{BE(on)*}$ Base - Emitter voltage	$I_C = 1A$ $V_{CE} = 2V$			1.0	V
h_{FE*} DC Current gain	$I_C = 0.5A$ $V_{CE} = 2V$	40		250	
	$I_C = 4A$ $V_{CE} = 2V$	15		150	
f_T Transition frequency	$I_C = 0.5A$ $V_{CE} = 10V$ $F = 20MHz$	30			MHz

*Pulsed : Pulse duration = 300 μs , duty cycle = 1.5%

SWITCHING CHARACTERISTICS

Parameter	Test Conditions	Max.	Unit
t_{on} On Time ($t_d + t_r$)	$I_C = 2A$ $V_{CC} = 80V$ $I_{B1} = 0.2A$	0.5	μs
t_s Storage Time	$I_C = 2A$ $V_{CC} = 80V$ $I_{B1} = -I_{B2} = 0.2A$	1.5	μs
t_f Fall Time		0.3	μs

THERMAL DATA

$R_{THj-case}$	Thermal resistance junction - case	Max. 4.0 $^{\circ}C/W$
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