

## Technical Information

### Index of Key Symbols

B	Base connection	Kv	Thermal resistance correction factor
C	Capacitance; junction capacitance; Collector connection	$P_{tot}$	Power dissipation
$C_{CBO}$	Collector base capacitance (open emitter)	$P_D$	Continuous power dissipation
$C_{EBO}$	Emitter base capacitance (open collector)	$P_i$	Pulse power dissipation
$C_{iss}$	Input capacitance	$r_b \cdot c_c$	Collector base time constant
E	Emitter connection	$r_{thA}$	Pulse thermal resistance junction to ambient air
f	Frequency	$r_{thC}$	Pulse thermal resistance junction to case
$f_r$	Gain bandwidth product	R	Resistance; resistor
F	Noise figure	$R_{BE}$	Resistance between base and emitter
$F_C$	Noise figure in mixer stages	$R_L$	Load resistance
h	Parameters of h-(hybrid) matrix	$R_S$	Series resistance
$h_f$	Small signal current gain	$R_{th}$	Thermal resistance
$h_i$	Input impedance	$R_{thA}$	Thermal resistance junction to ambient air
$h_o$	Output admittance	$R_{thC}$	Thermal resistance junction to case resp. mounting base
$h_r$	Reverse voltage transfer ratio	$R_{thC/S}$	Thermal resistance case or mounting base to heat sink
$h_{FE}$	DC current gain, common emitter	$R_{thS}$	Thermal resistance heat sink to ambient air
$I_B$	Base current	t	Time
$I_{BM}$	Peak base current	$t_d$	Delay time
$I_{B1}$	Turn-on current	$t_f$	Fall time
$I_{B2}$	Turn-off current	$t_{off}$	Turn-off time ( $t_s+t_f$ )
$I_C$	Collector current	$t_{on}$	Turn-on time ( $t_d+t_r$ )
$I_{CAV}$	Average collector current	$t_p$	Pulse duration
$I_{CBO}$	Collector base cutoff current (open emitter)	$t_{pd}$	Propagation delay time
$I_{CEO}$	Collector emitter cutoff current (open base)	$t_r$	Rise time
$I_{CER}$	Collector emitter cutoff current (specified resistance between base and emitter)	$t_s$	Storage time
$I_{CES}$	Collector emitter cutoff current (base short- circuited to emitter)	$t_{total}$	Total switching time ( $t_{on}+t_{off}$ )
$I_{CEV}$	Collector emitter cutoff current (specified voltage between base and emitter)	T	Temperature; duration of one period
$I_{CM}$	Peak collector current	$T_{amb}$	Ambient temperature
$I_E$	Emitter current	$T_j$	Junction temperature
$I_{EBO}$	Emitter base cutoff current (open collector)	$T_C$	Case temperature
		$T_S$	Storage temperature
		$T_{SB}$	Temperature of substrate backside

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$V$	Voltage
$V_{BB}$	Base supply voltage
$V_{BE}$	Base emitter voltage
$V_{BEsat}$	Base emitter saturation voltage
$V_{(BR)CBO}$	Collect base breakdown voltage (open emitter)
$V_{(BR)CEO}$	Collector emitter breakdown voltage (open base)
$V_{(BR)CER}$	Collector emitter breakdown voltage (specified resistance between base and emitter)
$V_{(BR)CES}$	Collector emitter breakdown voltage (emitter short-circuited to base)
$V_{(BR)EBO}$	Emitter base breakdwon voltage (open collector)
$V_{CB}$	Collector base voltage
$V_{CBO}$	Collector base voltage (open emitter)
$V_{CC}$	Collector supply voltage
$V_{CE}$	Collector emitter voltage
$V_{CEO}$	Collector emitter voltage (open base)
$V_{CER}$	Collector emitter voltage (specified resistance between base and emitter)
$V_{CES}$	Collector emitter voltage (emitter short-circuit to base)
$V_{CEsat}$	Collector emitter saturation voltage
$V_{CEV}$	Collector emitter voltage (specified voltage between base and emitter)
$V_{EBO}$	Emitter base voltage (open collector)
$V_{EE}$	Emitter supply voltage
$V_i$	Input voltage
$V_o$	Output voltage
$T_s$	Storage time constant
$V$	Duty cycle (tp/T)