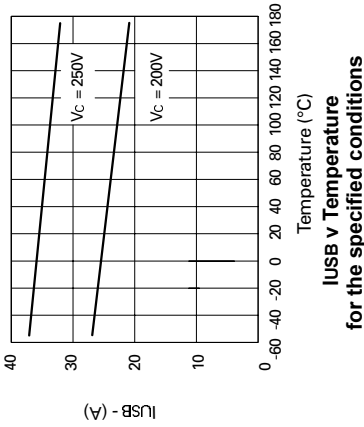
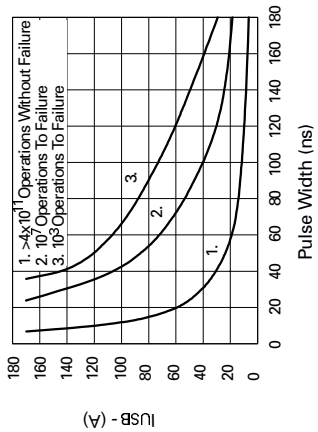


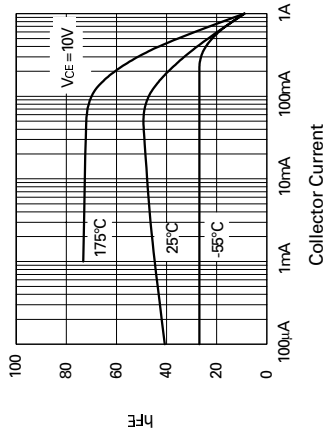
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TYPICAL CHARACTERISTICS

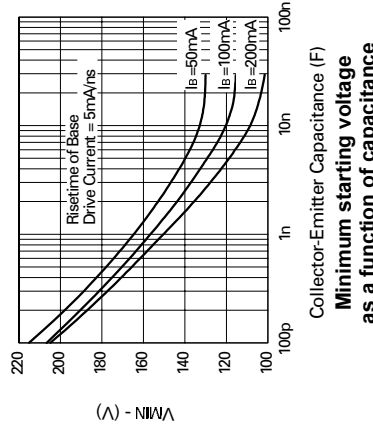


Maximum Avalanche Current v Pulse Width

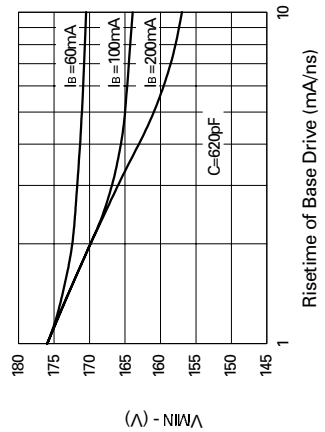
I_{USB} v Temperature for the specified conditions



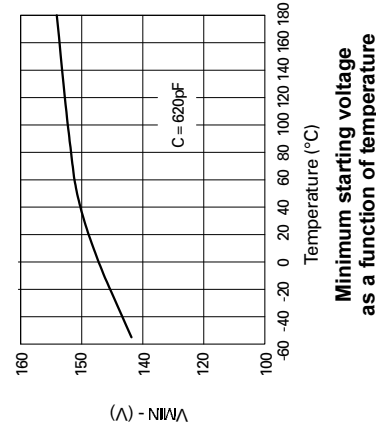
h_{FE} v I_C



Minimum starting voltage as a function of capacitance



Minimum starting voltage as a function of drive current



Minimum starting voltage as a function of temperature

FEATURES

- * Specifically designed for Avalanche mode operation
 - * 60A Peak Avalanche Current (Pulse width=20ns)
 - * Low inductance package
- APPLICATIONS
- * Laser LED drivers
 - * Fast edge generation
 - * High speed pulse generators
 - * Suitable for single, series and parallel operation

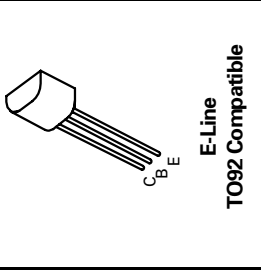
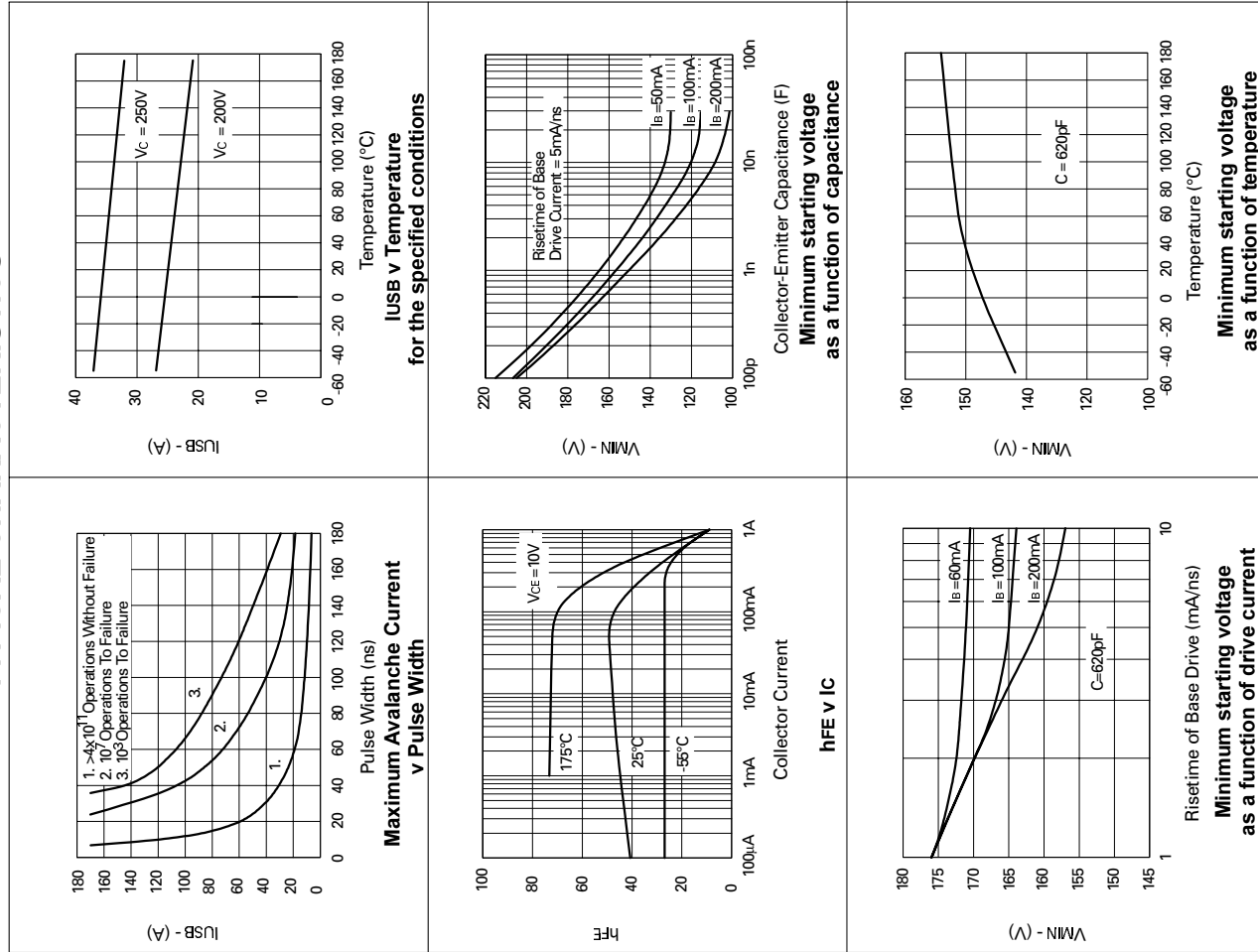
ABSOLUTE MAXIMUM RATINGS.

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V _{CBO}	260	V
Collector-Emitter Voltage	V _{CEO}	100	V
Emitter-Base Voltage	V _{EBO}	6	V
Continuous Collector Current	I _C	500	mA
Peak Collector Current (Pulse Width=20ns)	I _{CM}	60	A
Power Dissipation	P _{tot}	680	mW
Operating and Storage Temperature Range	T _J ; T _{stg}	-55 to +175	°C

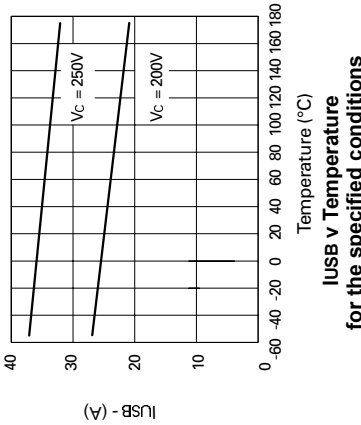
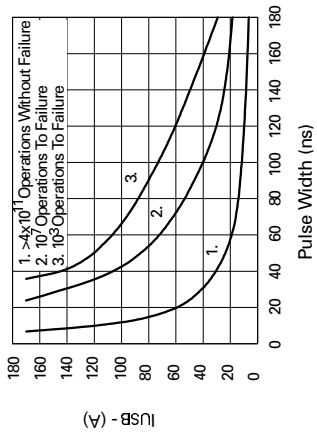
ELECTRICAL CHARACTERISTICS (at T_{amb} = 25°C unless otherwise stated).

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	V _{(BR)CES}	260			V	I _C =1mA T _{amb} = -55 to +175°C
Collector-Emitter Breakdown Voltage	V _{CEO(sus)}	100			V	I _C =100μA
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	6			V	I _E =10μA
Collector Cut-Off Current	I _{CBO}			0.1 10	μA	V _{CB} =180V V _{CE} =180V, T _{amb} =100°C
Emitter Cut-Off Current	I _{EBO}			0.1	μA	V _{EB} =4V
Collector-Emitter Saturation Voltage	V _{CE(sat)}			0.5	V	I _C =10mA, I _B =1mA*
Base-Emitter Saturation Voltage	V _{BE(sat)}			0.9	V	I _C =10mA, I _B =1mA*
Current in Second Breakdown (Pulsed)	I _{SB}	15 25			A	V _C =200V, C _{CE} =620pF V _C =250V, C _{CE} =620pF
Static Forward Current Transfer Ratio	h _{FE}	25				I _C =10mA, V _{CE} =10V*
Transition Frequency	f _T	40			MHz	I _C =10mA, V _{CE} =20V f=20MHz
Collector-Base Capacitance	C _{cb}			8	pF	V _{CB} =20V, I _E =0 f=100MHz

*Measured under pulsed conditions. Pulse width=300μs. Duty cycle ≤ 2%

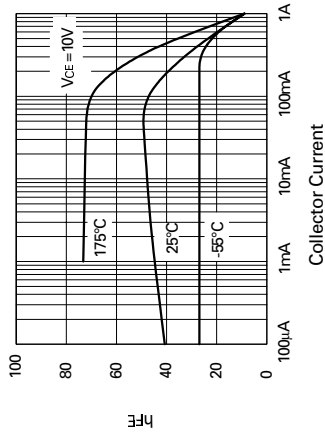


TYPICAL CHARACTERISTICS

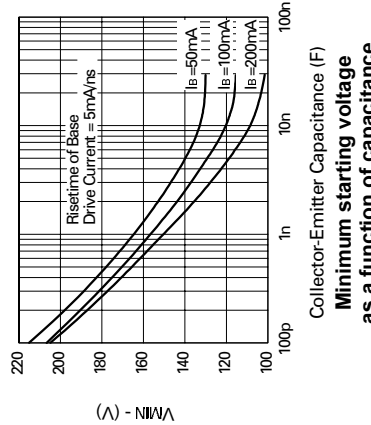


Maximum Avalanche Current v Pulse Width

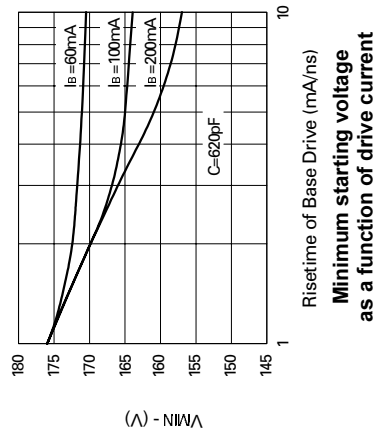
IUSB v Temperature for the specified conditions



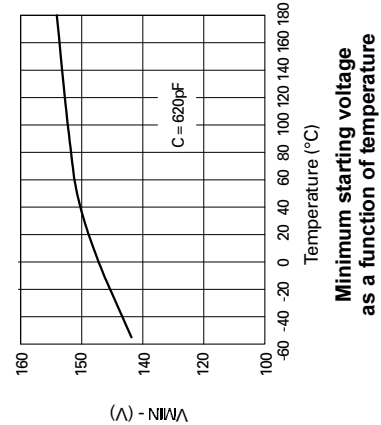
hFE v IC



Minimum starting voltage as a function of capacitance



Minimum starting voltage as a function of drive current



Minimum starting voltage as a function of temperature

FEATURES

- * Specifically designed for Avalanche mode operation
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 - * Low inductance package
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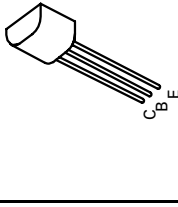
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PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V_{CBO}	260	V
Collector-Emitter Voltage	V_{CEO}	100	V
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Continuous Collector Current	I_C	500	mA
Peak Collector Current (Pulse Width=20ns)	I_{CM}	60	A
Power Dissipation	P_{tot}	680	mW
Operating and Storage Temperature Range	T_j, T_{stg}	-55 to +175	°C

ELECTRICAL CHARACTERISTICS (at $T_{amb} = 25^\circ\text{C}$ unless otherwise stated).

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	CONDITIONS.
Collector-Base Breakdown Voltage	$V_{(BR)CES}$	260			V	$I_C = 1\text{mA}$ $T_{amb} = -55$ to $+175^\circ\text{C}$
Collector-Emitter Breakdown Voltage	$V_{CE(sus)}$	100			V	$I_C = 100\mu\text{A}$
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	6			V	$I_E = 10\mu\text{A}$
Collector Cut-Off Current	I_{CBO}			0.1 10	μA μA	$V_{CB} = 180\text{V}$ $V_{CB} = 180\text{V}, T_{amb} = 100^\circ\text{C}$
Emitter Cut-Off Current	I_{EBO}			0.1	μA	$V_{EB} = 4\text{V}$
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$			0.5	V	$I_C = 10\text{mA}, I_B = 1\text{mA}^*$
Base-Emitter Saturation Voltage	$V_{BE(sat)}$			0.9	V	$I_C = 10\text{mA}, I_B = 1\text{mA}^*$
Current in Second Breakdown (Pulsed)	I_{SB}	15 25			A A	$V_C = 200\text{V}, C_{CE} = 620\text{pF}$ $V_C = 250\text{V}, C_{CE} = 620\text{pF}$
Static Forward Current Transfer Ratio	h_{FE}	25				$I_C = 10\text{mA}, V_{CE} = 10\text{V}^*$
Transition Frequency	f_T	40			MHz	$I_C = 10\text{mA}, V_{CE} = 20\text{V}$ $f = 20\text{MHz}$
Collector-Base Capacitance	C_{cb}			8	pF	$V_{CB} = 20\text{V}, I_E = 0$ $f = 100\text{MHz}$

*Measured under pulsed conditions. Pulse width=300µs. Duty cycle ≤ 2%



E-Line
TO92 Compatible