



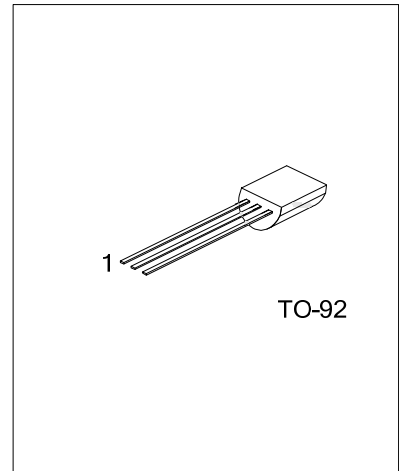
MPSA06

NPN SILICON TRANSISTOR

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■ FEATURES

- * Collector-emitter voltage: $V_{CE0}=80V$
- * Collector dissipation: $P_D=625mW$

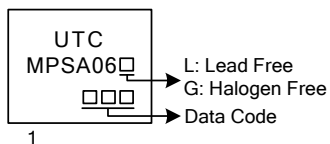


■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
MPSA06L-T92-B	MPSA06G-T92-B	TO-92	E	B	C	Tape Box
MPSA06L-T92-K	MPSA06G-T92-K	TO-92	E	B	C	Bulk

MPSA06G-T92-B (1) Packing Type (2) Package Type (3) Green Package	(1) B: Tape Box, K: Bulk (2) T92: TO-92 (3) G: Halogen Free and Lead Free, L: Lead Free
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■ MARKING



■ ABSOLUTE MAXIMUM RATING ($T_A=25^\circ\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V_{CBO}	80	V
Collector-Emitter Voltage	V_{CEO}	80	V
Emitter-Base Voltage	V_{EBO}	4	V
Collector Current - Continuous	I_C	500	mA
Total device Dissipation, @ $T_A=25^\circ\text{C}$ Derate above 25°C	P_D	625 5	mW mW/ $^\circ\text{C}$
Total device Dissipation, @ $T_C=25^\circ\text{C}$ Derate above 25°C	P_D	1500 12	mW mW/ $^\circ\text{C}$
Junction Temperature	T_J	+125	$^\circ\text{C}$
Storage Temperature	T_{STG}	-55 ~ +150	$^\circ\text{C}$

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	RATINGS	UNIT
Junction-to-Ambient	θ_{JA}	200	$^\circ\text{C/W}$
Junction-to-Case	θ_{JC}	83.3	$^\circ\text{C/W}$

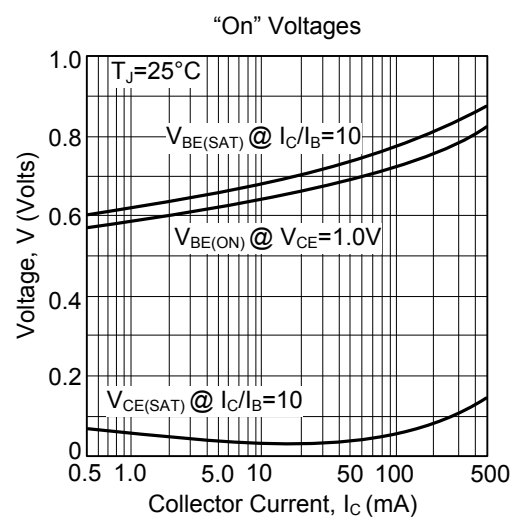
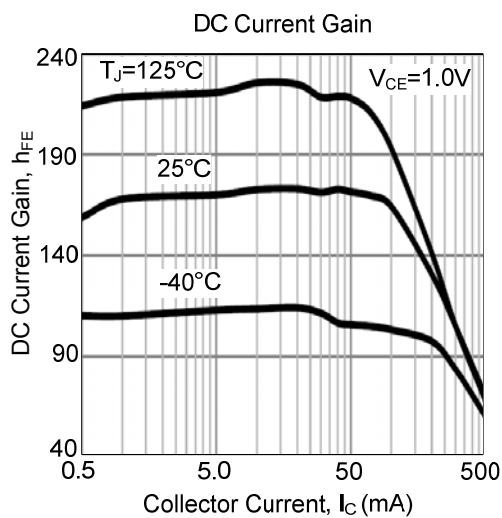
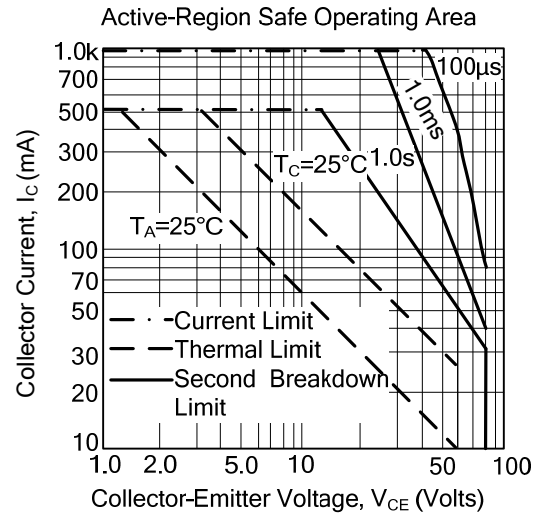
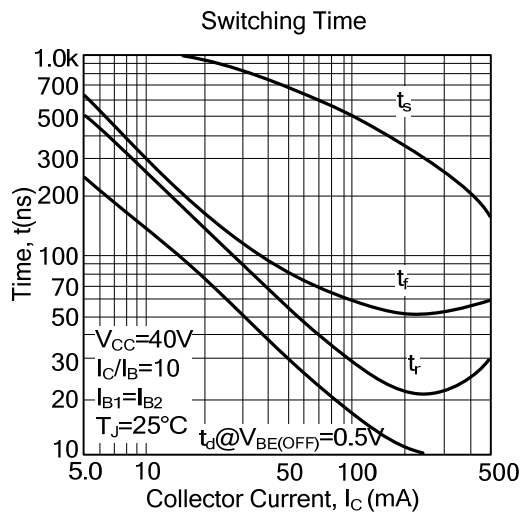
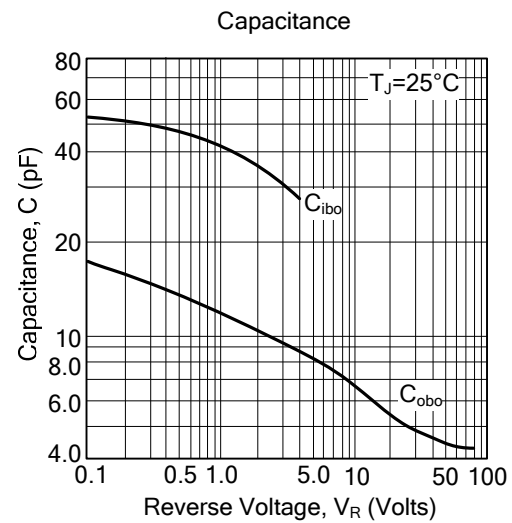
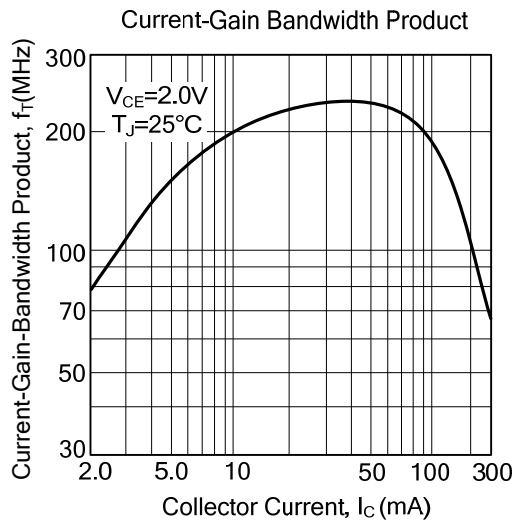
■ ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
OFF CHARACTERISTICS						
Collector-Emitter Breakdown Voltage (Note 1)	BV_{CEO}	$I_C=1.0\text{mA}$, $I_B=0$	80			V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E=100\mu\text{A}$, $I_C=0$	4			V
Collector Cutoff Current	I_{CEO}	$V_{CE}=60\text{V}$, $I_B=0$			0.1	μA
Collector Cutoff Current	I_{CBO}	$V_{CB}=80\text{V}$, $I_E=0$			0.1	μA
ON CHARACTERISTICS						
Dc Current Gain	h_{FE}	$I_C=10\text{mA}$, $V_{CE}=1\text{V}$	100			
		$I_C=100\text{mA}$, $V_{CE}=1\text{V}$	100			
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=100\text{mA}$, $I_B=10\text{mA}$			0.25	V
Base-Emitter On Voltage	$V_{BE(ON)}$	$I_C=100\text{mA}$, $V_{CE}=1\text{V}$			1.2	V
SMALL-SIGNAL CHARACTERISTICS						
Current Gain Bandwidth Product (Note 2)	f_T	$I_C=10\text{mA}$, $V_{CE}=2\text{V}$, $f=100\text{MHz}$	100			MHz

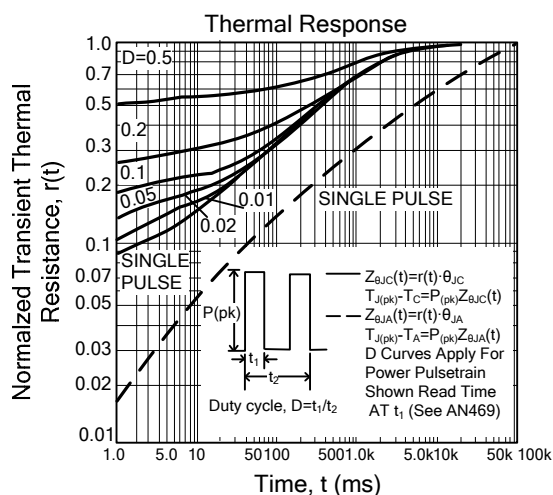
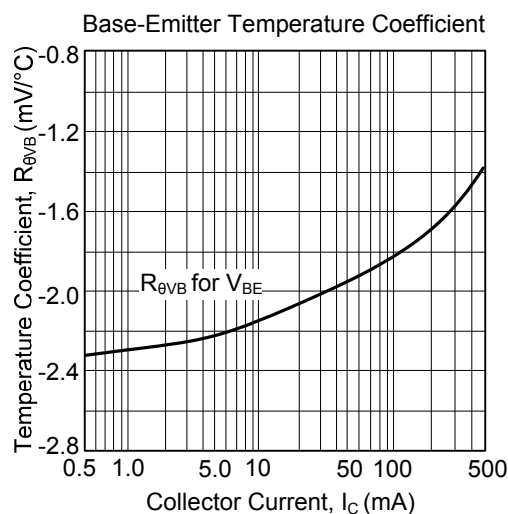
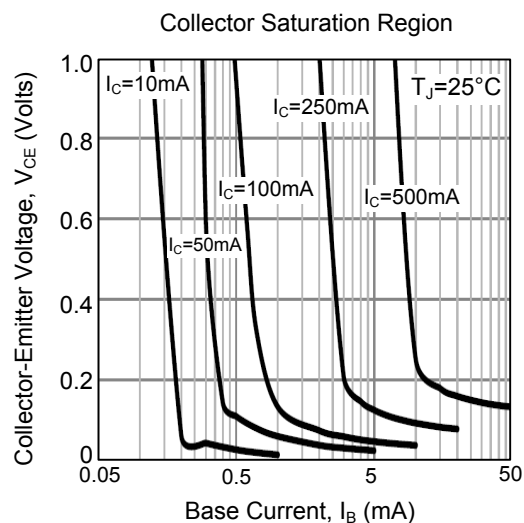
Notes: 1. Pulse test: $P_W \leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$.

2. f_T is defined as the frequency at which $|h_{fe}|$ extrapolates to unity.

TYPICAL CHARACTERISTICS



TYPICAL CHARACTERISTICS(Cont.)



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