MPSA06

NPN SILICON TRANSISTOR

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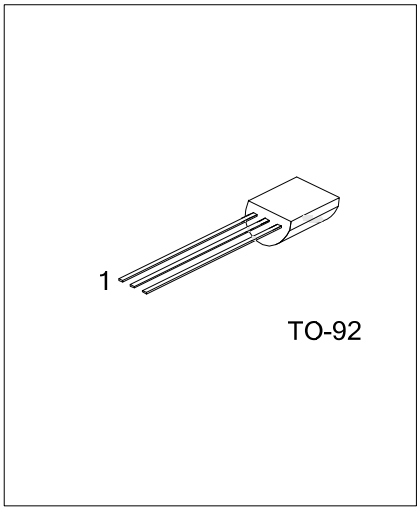


■ FEATURES

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

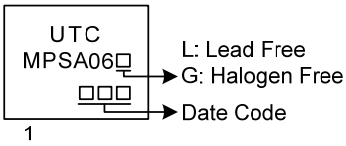
■ ORDERING INFORMATION

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

Note: Pin Assignment: E: Emitter B: Base C: Case

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

■ MARKING



■ ABSOLUTE MAXIMUM RATING (T_A=25°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°C Derate above 25°C	P_D	625 5	mW mW/°C
Total device Dissipation, @T_C=25°C Derate above 25°C	P_D	1500 12	mW mW/°C
Junction Temperature	T_J	+125	°C
Storage Temperature	T_{STG}	-55 ~ +150	°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 DATA

PARAMETER	SYMBOL	RATINGS	UNIT
Junction-to-Ambient	θ_{JA}	200	°C/W
Junction-to-Case	θ_{JC}	83.3	°C/W

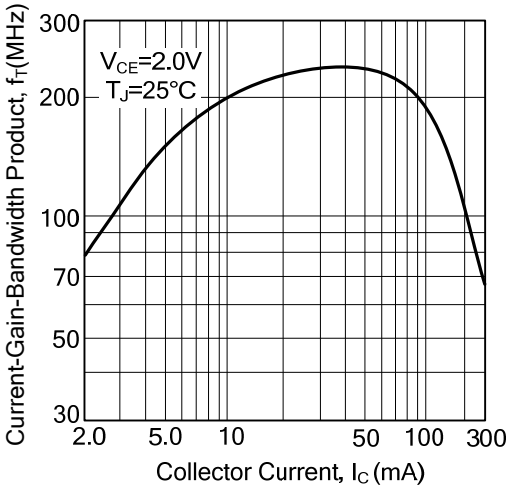
■ ELECTRICAL CHARACTERISTICS (Ta=25°C, unless otherwise specified)

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

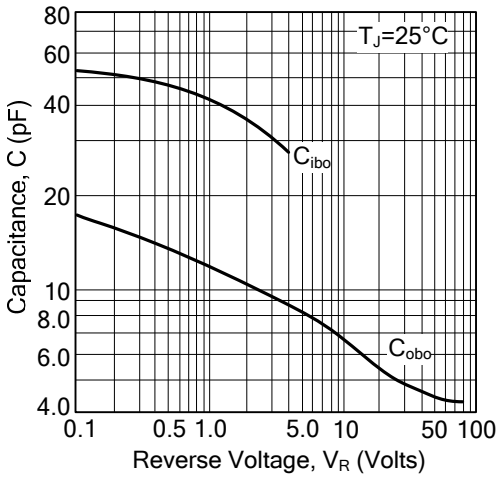
Notes: 1. Pulse test: P_W ≤ 300μs, Duty Cycle ≤ 2%.
2. f_T is defined as the frequency at which Ihfel extrapolates to unity.

■ TYPICAL CHARACTERISTICS

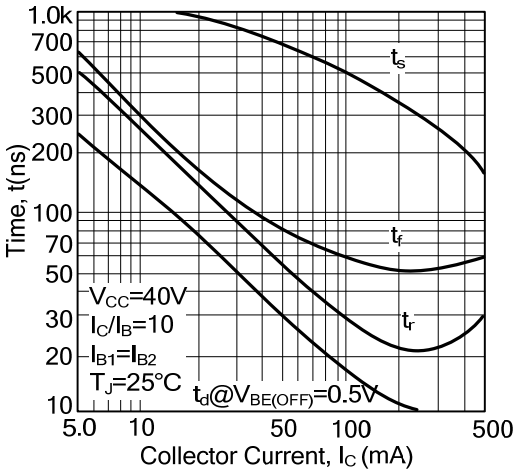
Current-Gain Bandwidth Product



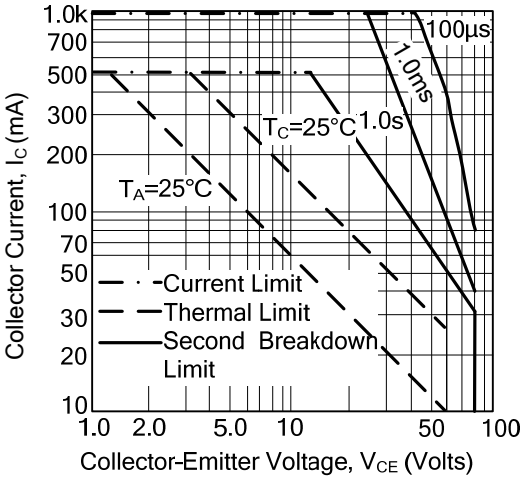
Capacitance



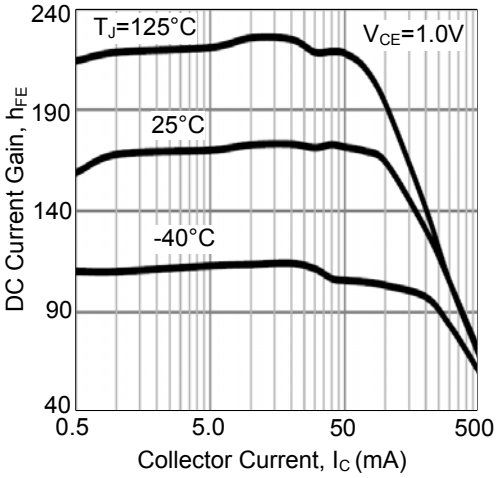
Switching Time



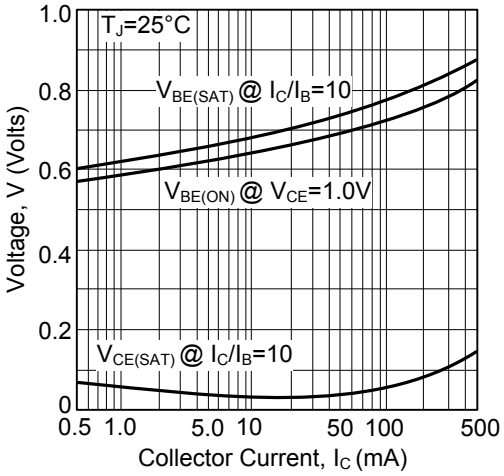
Active-Region Safe Operating Area



DC Current Gain



"On" Voltages



■ TYPICAL CHARACTERISTICS (Cont.)