

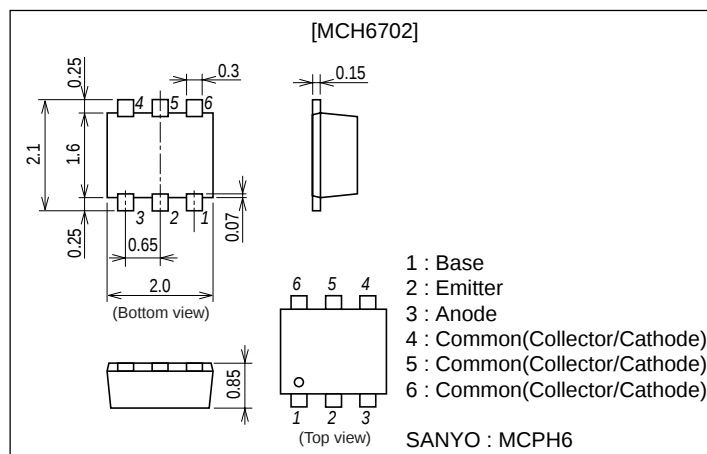
**MCH6702****DC/DC Converter Applications****Features**

- Composite type with a PNP transistor and a Schottky barrier diode contained in one package facilitating high-density mounting.
- The MCH6702 consists of two chips which are equivalent to the MCH6101 and SBS006, respectively.
- The ultrasmall package facilitates miniaturization in end products. (mounting height 0.85mm).

Package Dimensions

unit : mm

2191A

**Specifications****Absolute Maximum Ratings** at Ta=25°C

Parameter	Symbol	Conditions	Ratings	Unit
[TR]				
Collector-to-Base Voltage	V_{CBO}		-15	V
Collector-to-Emitter Voltage	V_{CEO}		-15	V
Emitter-to-Base Voltage	V_{EBO}		-5	V
Collector Current	I_C		-1.5	A
Collector Current (Pulse)	I_{CP}		-3	A
Base Current	I_B		-300	mA
Collector Dissipation	P_C	Mounted on a ceramic board(600mm ² ×0.8mm)	1.0	W
Junction Temperature	T_j		150	°C
Storage Temperature	T_{stg}		-55 to +125	°C
[SBD]				
Repetitive Peak Reverse Voltage	V_{RRM}		30	V
Non-repetitive Peak Reverse Surge Voltage	V_{RSM}		30	V
Average Output Current	I_O		0.7	A
Surge Current	I_{FSM}	50Hz sine wave, 1 cycle	10	A
Junction Temperature	T_j		-55 to +125	°C
Storage Temperature	T_{stg}		-55 to +125	°C

Marking : PB

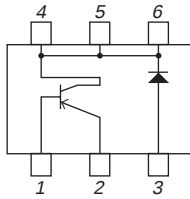
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Electrical Characteristics at Ta=25°C

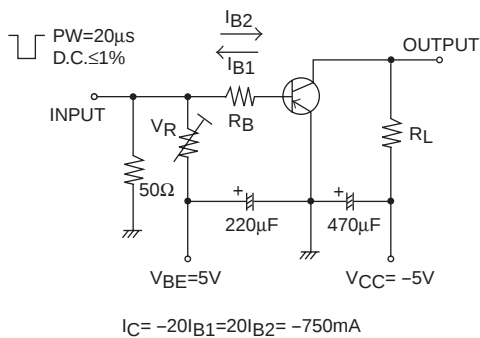
Parameter	Symbol	Conditions	Rathings			Unit
			min	typ	max	
[TR]						
Collector Cutoff Current	ICBO	V _{CB} =-12V, I _E =0			-0.1	μA
Emitter Cutoff Current	I _{EBO}	V _{EB} =-4V, I _C =0			-0.1	μA
DC Current Gain	h _{FE}	V _{CE} =-2V, I _C =-100mA	200		560	
Gain-Bandwidth Product	f _T	V _{CE} =-2V, I _C =-300mA		350		MHz
Output Capacitance	C _{ob}	V _{CB} =-10V, f=1MHz		17		pF
Collector-to-Emitter Saturation Voltage	V _{CE(sat)}	I _C =-750mA, I _B =-15mA		-120	-180	mV
Base-to-Emitter Saturation Voltage	V _{BE(sat)}	I _C =-750mA, I _B =-15mA		-0.85	-1.2	V
Collector-to-Base Breakdown Voltage	V _{(BR)CBO}	I _C =-10μA, I _E =0	-15			V
Collector-to-Emitter Breakdown Voltage	V _{(BR)CEO}	I _C =-1mA, R _{BE} =∞	-15			V
Emitter-to-Base Breakdown Voltage	V _{(BR)EBO}	I _E =-10μA, I _C =0	-5			V
Turn-ON Time	t _{on}	See specified Test Circuit		50		ns
Storage Time	t _{stg}	See specified Test Circuit		90		ns
Fall Time	t _f	See specified Test Circuit		15		ns
[Di]						
Reverse Voltage	V _R	I _R =0.5mA	30			V
Forward Voltage	V _{F1}	I _F =0.3A		0.35	0.40	V
	V _{F2}	I _F =0.5A		0.42	0.47	V
	V _{F3}	I _F =0.7A		0.5	0.55	V
Reverse Current	I _R	V _R =10V			200	μA
Interterminal Capacitance	C	V _R =10V, f=1MHz		20		pF
Reverse Recovery Time	t _{rr}	I _F =I _R =100mA, See specified Test Circuit			10	ns

Electrical Connection



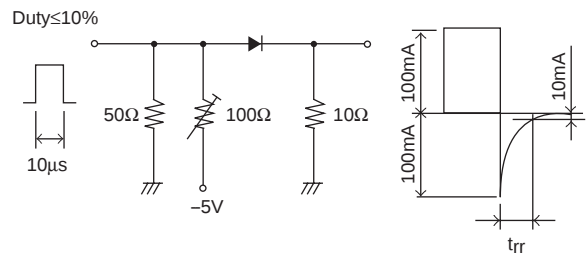
Switching Time Test Circuit

[TR]

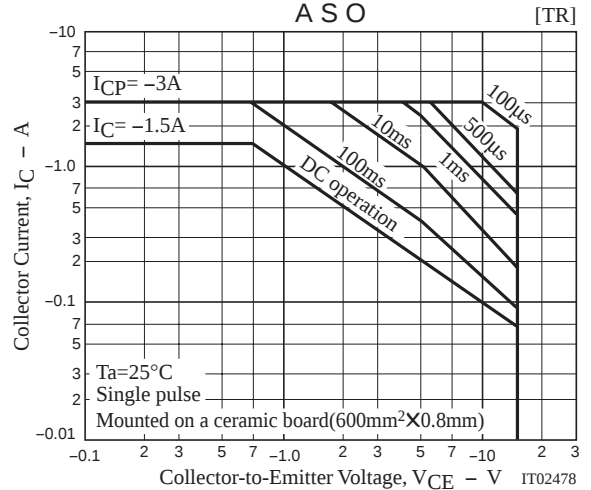
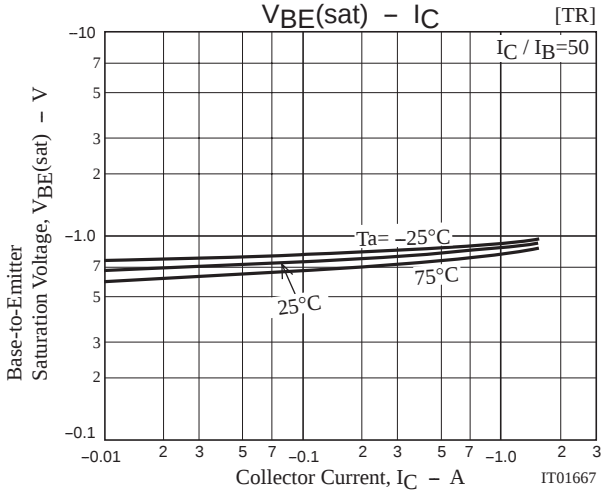
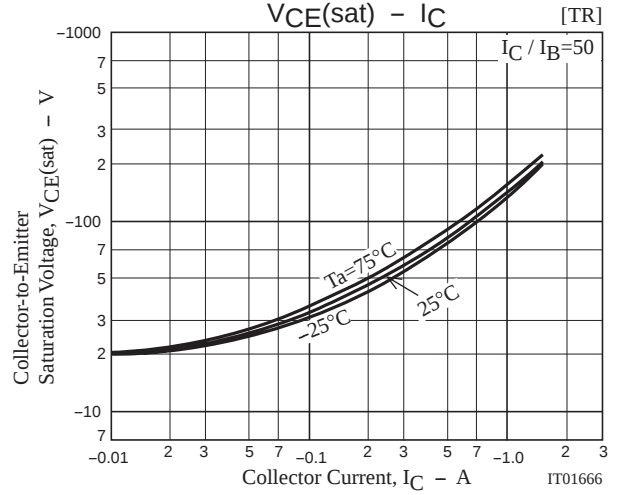
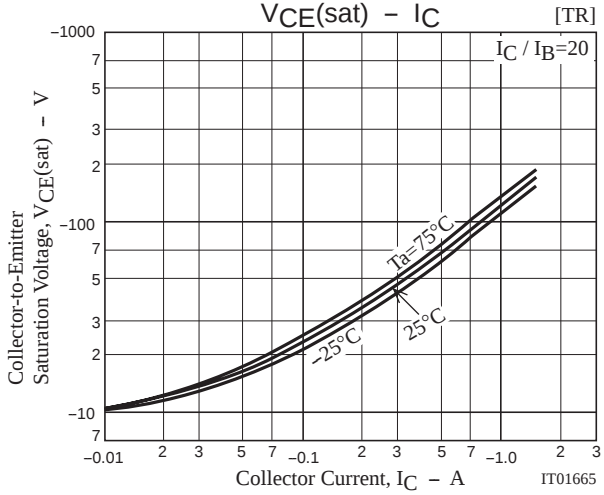
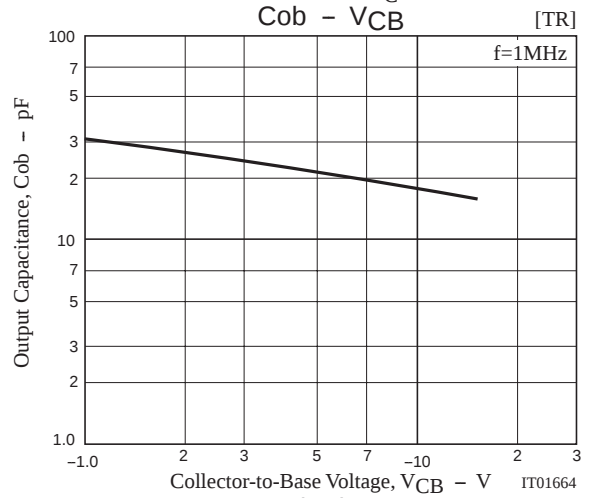
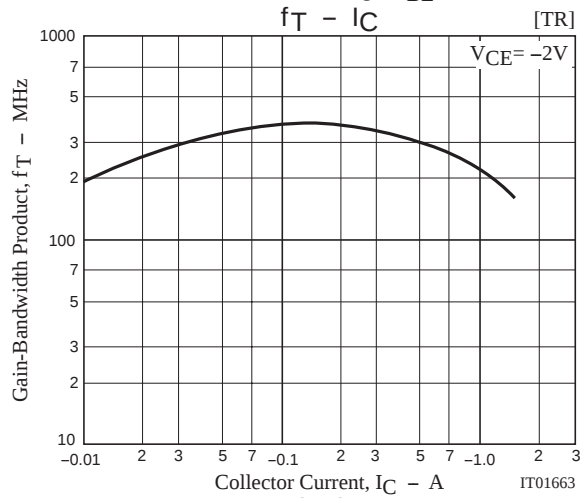
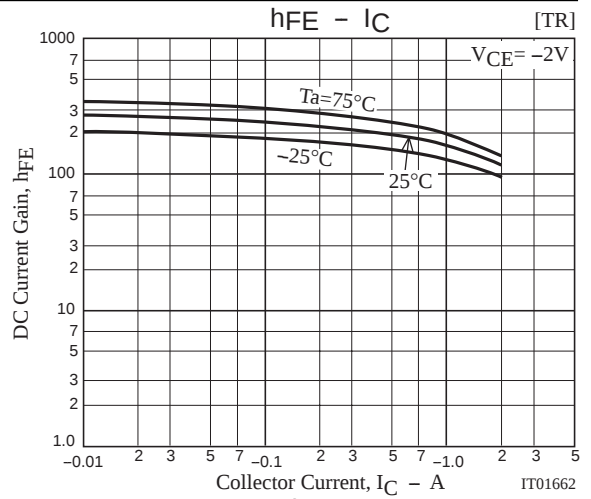
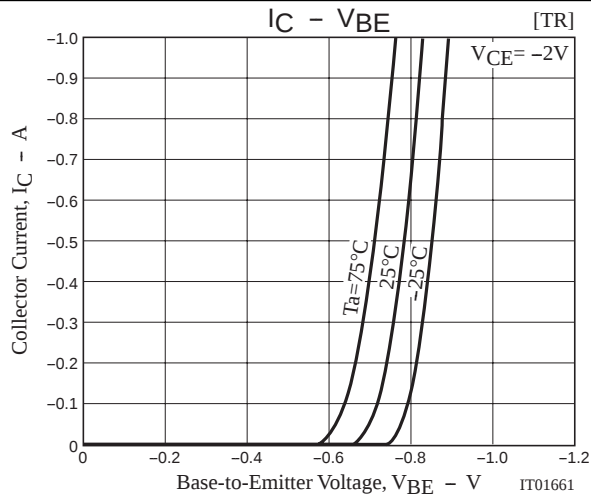


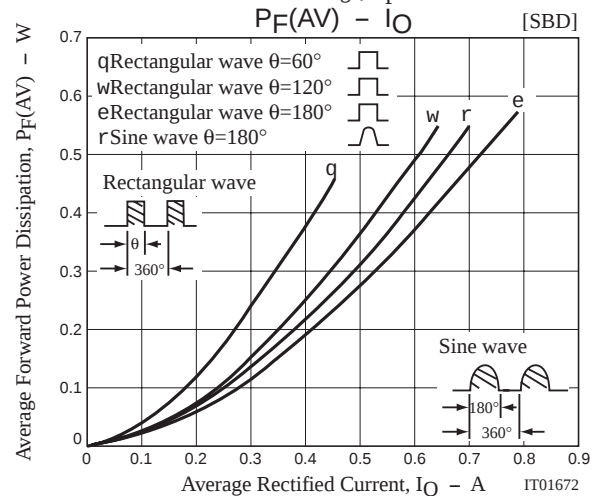
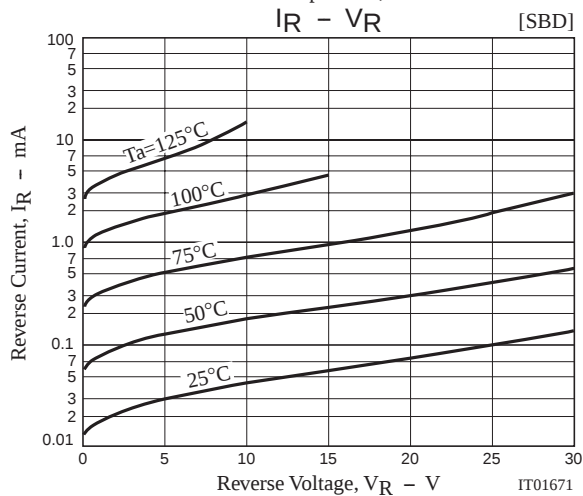
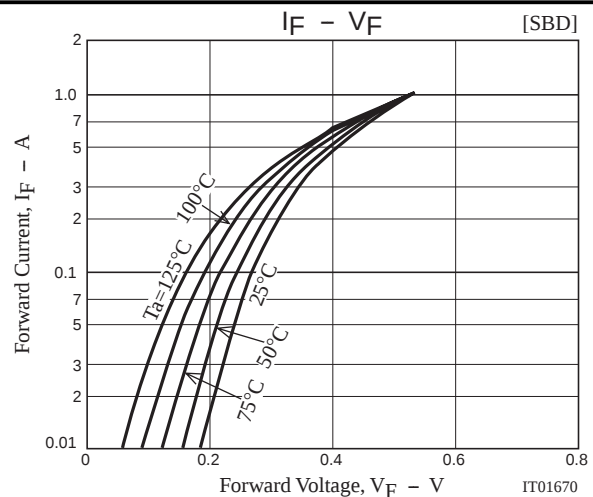
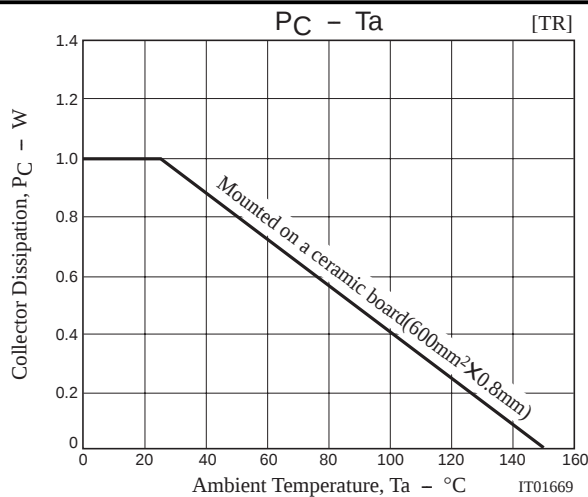
t_{rr} Specified Circuit

[Di]



MCH6702





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