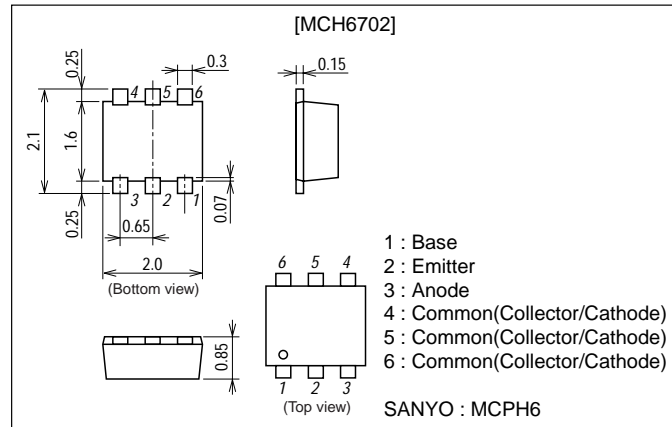


**MCH6702****DC/DC Converter Applications****Features**

- 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 Dimensionsunit : mm
2191A**Specifications****Absolute Maximum Ratings** at $T_a=25^\circ\text{C}$

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 X0.8mm)	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

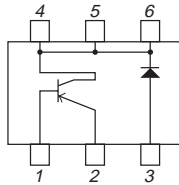
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- SANYO assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all SANYO products described or contained herein.

MCH6702

Electrical Characteristics at $T_a=25^\circ\text{C}$

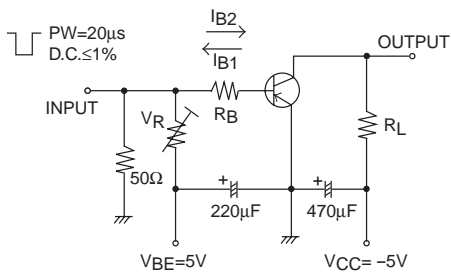
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
[TR]						
Collector Cutoff Current	I_{CBO}	$V_{CB}=-12\text{V}, I_E=0$			-0.1	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=-4\text{V}, I_C=0$			-0.1	μA
DC Current Gain	h_{FE}	$V_{CE}=-2\text{V}, I_C=-100\text{mA}$	200		560	
Gain-Bandwidth Product	f_T	$V_{CE}=-2\text{V}, I_C=-300\text{mA}$		350		MHz
Output Capacitance	C_{ob}	$V_{CB}=-10\text{V}, f=1\text{MHz}$		17		pF
Collector-to-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-750\text{mA}, I_B=-15\text{mA}$		-120	-180	mV
Base-to-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-750\text{mA}, I_B=-15\text{mA}$		-0.85	-1.2	V
Collector-to-Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C=-10\mu\text{A}, I_E=0$	-15			V
Collector-to-Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C=-1\text{mA}, R_{BE}=\infty$	-15			V
Emitter-to-Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E=-10\mu\text{A}, I_C=0$	-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	$I_R=0.5\text{mA}$	30			V
Forward Voltage	V_{F1}	$I_F=0.3\text{A}$		0.35	0.40	V
	V_{F2}	$I_F=0.5\text{A}$		0.42	0.47	V
	V_{F3}	$I_F=0.7\text{A}$		0.5	0.55	V
Reverse Current	I_R	$V_R=10\text{V}$			200	μA
Interterminal Capacitance	C	$V_R=10\text{V}, f=1\text{MHz}$		20		pF
Reverse Recovery Time	t_{rr}	$I_F=I_R=100\text{mA}$, See specified Test Circuit			10	ns

Electrical Connection



Switching Time Test Circuit

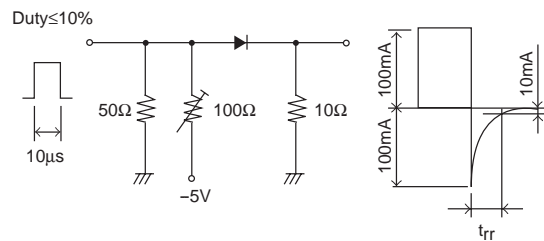
[TR]



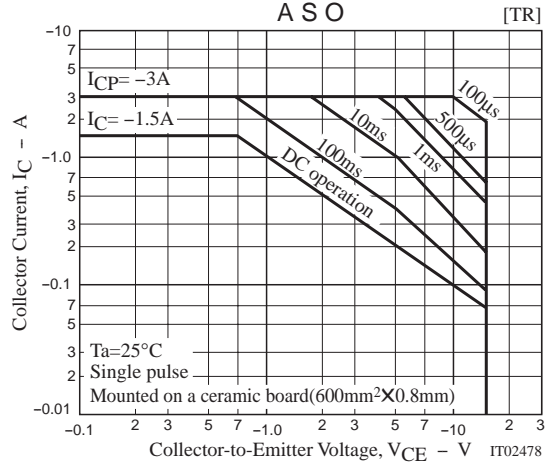
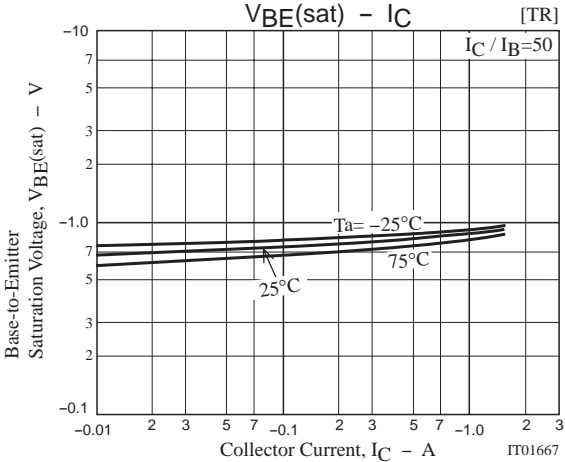
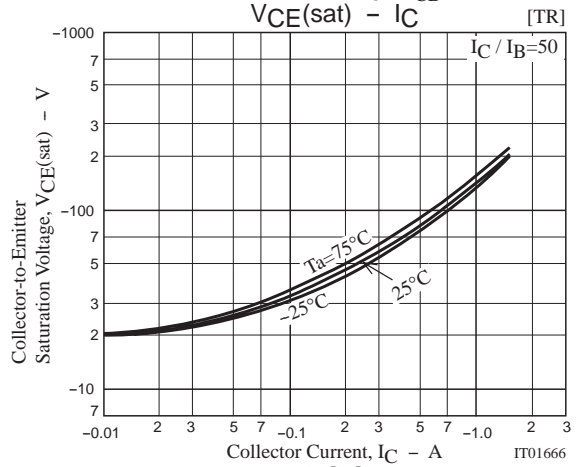
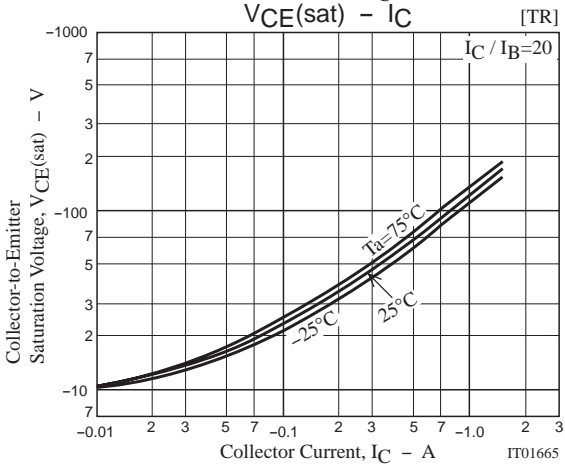
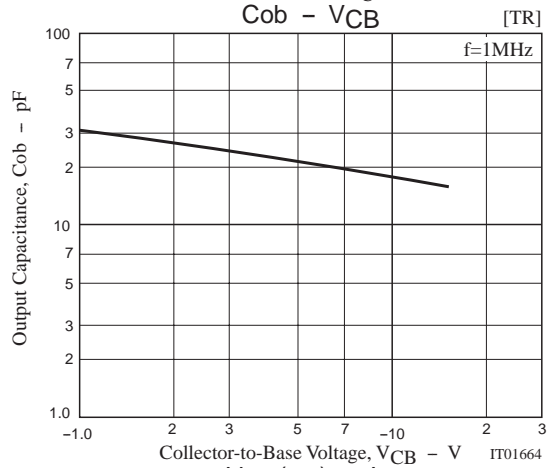
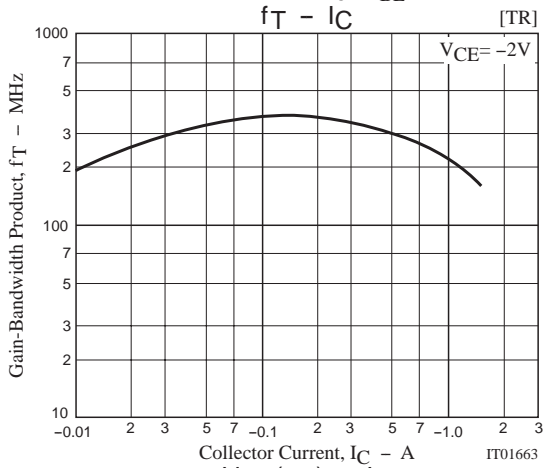
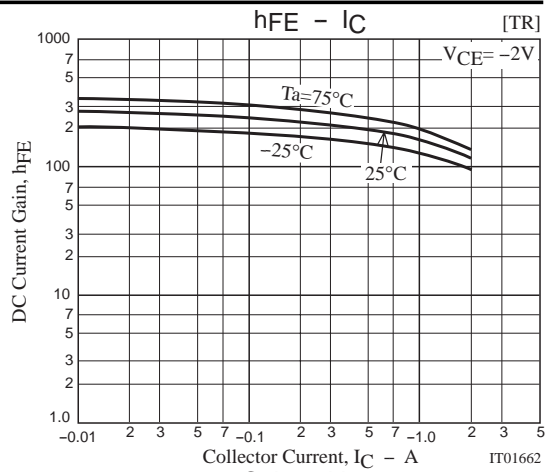
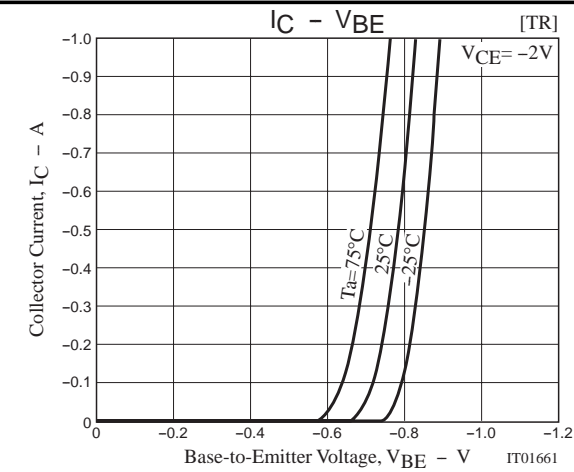
$$I_C = -20\text{mA}, I_{B1} = 20\text{mA}, I_{B2} = -750\text{mA}$$

t_{rr} Specified Circuit

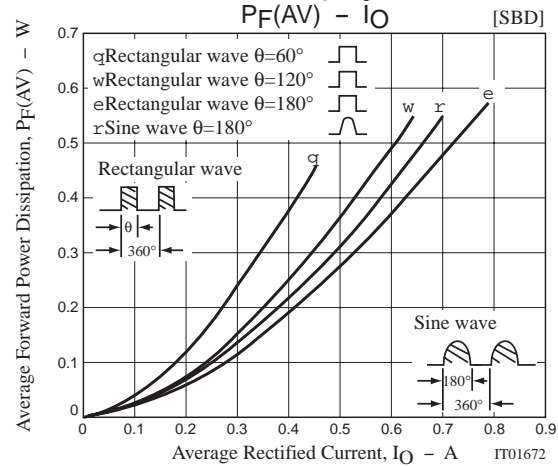
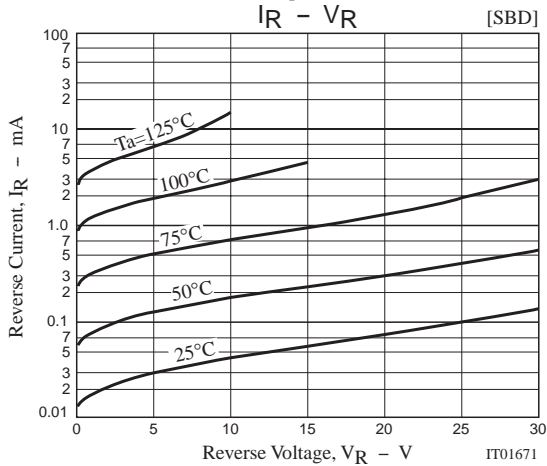
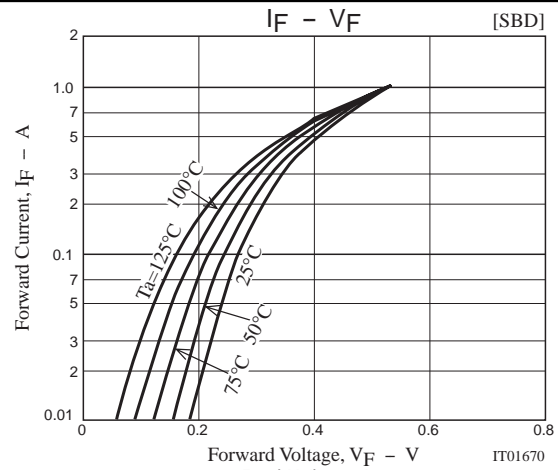
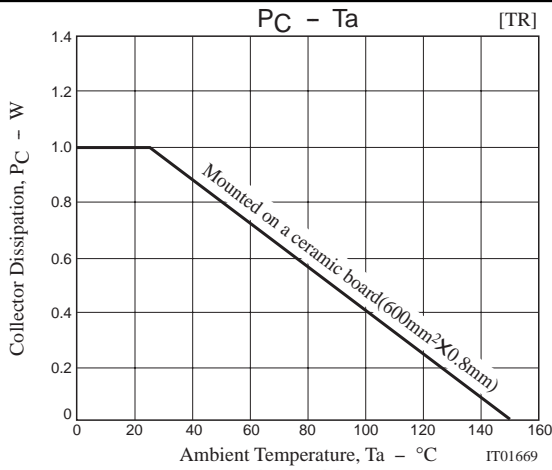
[Di]



MCH6702



MCH6702



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