



MG150HF12LEC2

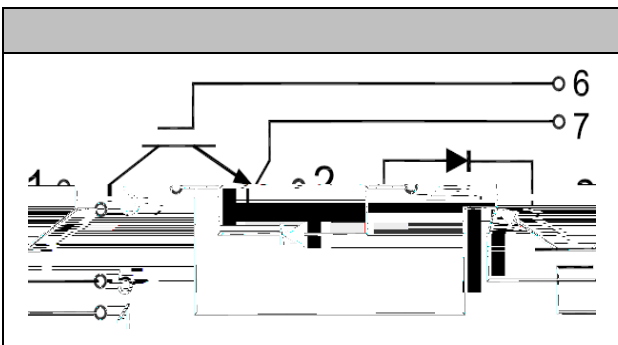


IGBT Modules

V_{CES}	1200V
I_c	150A

Applications

- High frequency drivers
- Solar inverters
- UPS (Uninterruptible Power Supplies)
- Electric welding machine



Features

- High speed IGBT in NPT technology
- Low switching losses
- High short circuit capability(10us)
- Including ultra fast & soft recovery anti-parallel FWD
- Low inductance
- Maximum junction temperature 150

● IGBT

Absolute Maximum Ratings

Parameter	Symbol	Conditions	Value	Unit
Collector-Emitter Voltage	V_{CES}	$V_{GE}=0V, I_c = 1mA, T_{vj}=25$	1200	V
Continuous Collector Current	I_c	$T_c=80$	150	A
Repetitive Peak Collector Current	I_{CRM}	$t_p=1ms$	300	A
Gate-Emitter Voltage	V_{GES}	$T_{vj}=25$	20	V
Total Power Dissipation	P_{tot}	$T_c=25$ $T_{vjmax}=150$	1136	W



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Characteristic values

Parameter	Symbol	Conditions	Value	Unit
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● Diode

Absolute Maximum Ratings

Parameter	Symbol	Conditions	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	$T_{vj}=25$	1200	V
Continuous DC Forward Current	I_F		150	A
Repetitive Peak Forward Current	I_{FRM}	$t_p=1\text{ms}$	300	A

Characteristic values

Parameter	Symbol	Conditions	Value			Unit
			Min.	Typ.	Max.	
Forward Voltage	V_F	$I_F=150\text{A}, T_{vj}=25$		1.90	2.40	V
		$I_F=150\text{A}, T_{vj}=125$		1.95		
Recovered Charge	Q_{rr}	$I_F=150\text{A}$		6.8		μC
Peak Reverse Recovery Current	I_{rr}	$V_R=600\text{V}$ $-di_F/dt=1400\text{A}/\mu\text{s}$		145		A
Reverse Recovery Energy	E_{rec}	$T_{vj}=25$		4.1		mJ
Recovered Charge	Q_{rr}	$I_F=150\text{A}$		14.5		μC
Peak Reverse Recovery Current	I_{rr}	$V_R=600\text{V}$ $-di_F/dt=1400\text{A}/\mu\text{s}$		160		A
Reverse Recovery Energy	E_{rec}	$T_{vj}=125$		8.4		mJ



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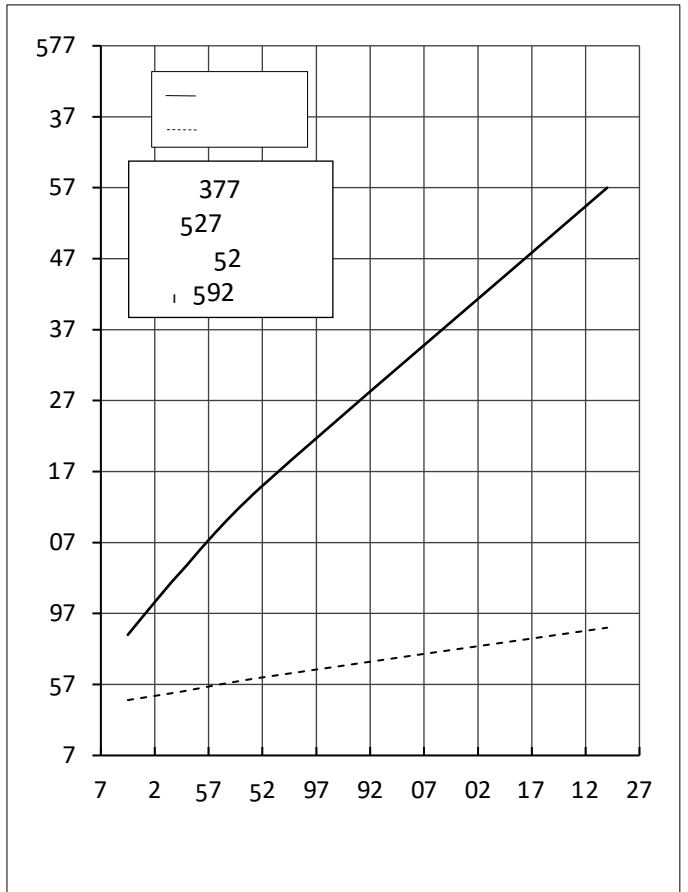
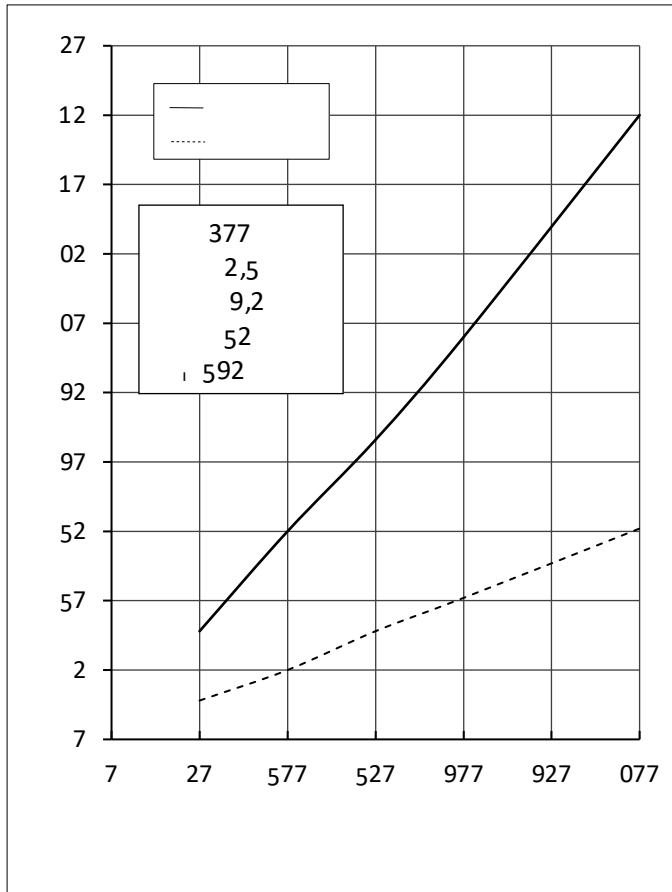
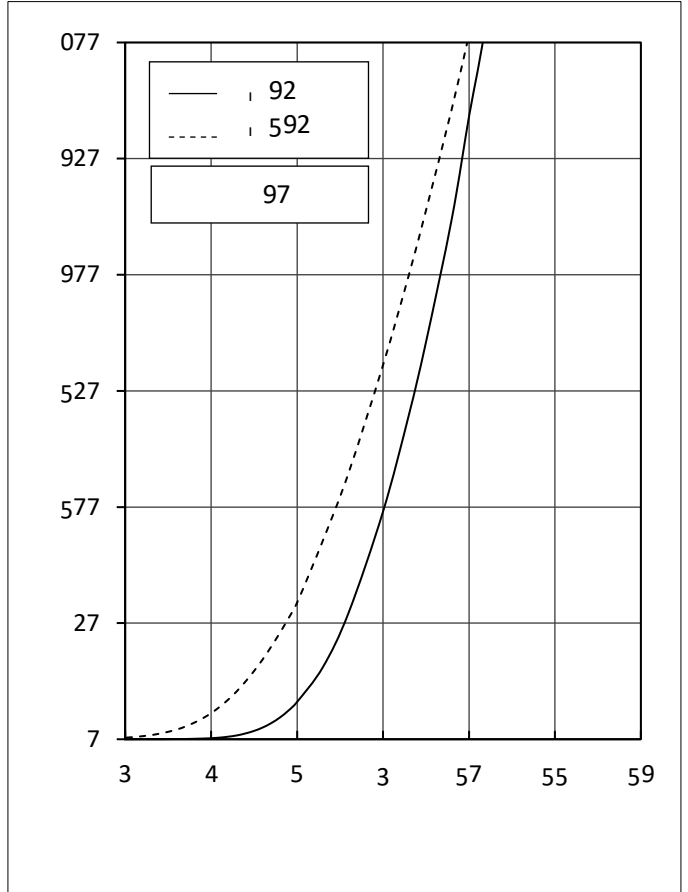
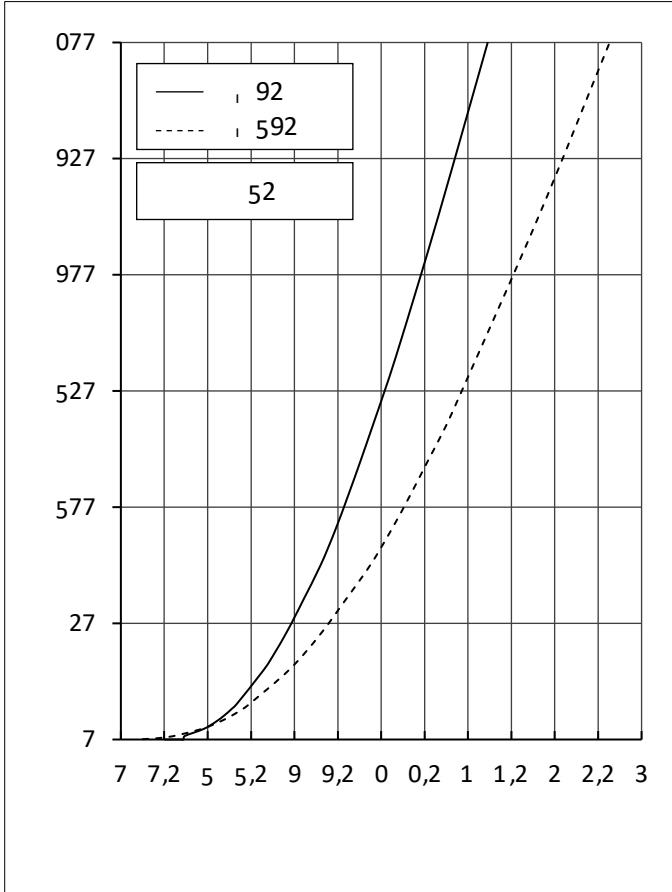


● **Module Characteristics** $T_C=25^{\circ}\text{C}$ unless otherwise specified

Parameter	Symbol	Conditions	Value			Unit
			Min.	Typ.	Max.	
Isolation voltage	V_{isol}	$t=1\text{min}, f=50\text{Hz}$	2500			V
Maximum Junction Temperature	T_{jmax}				150	

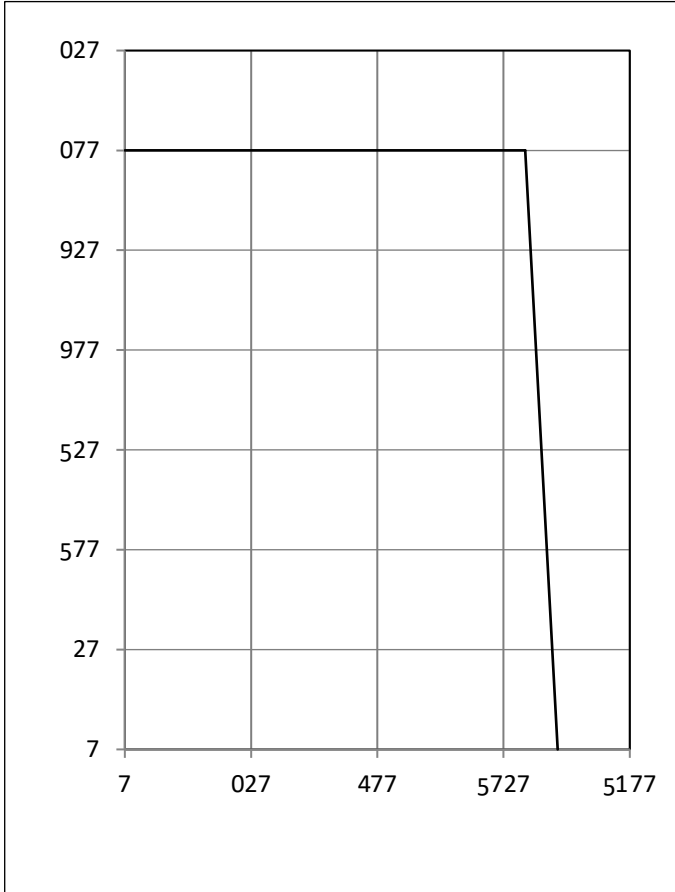


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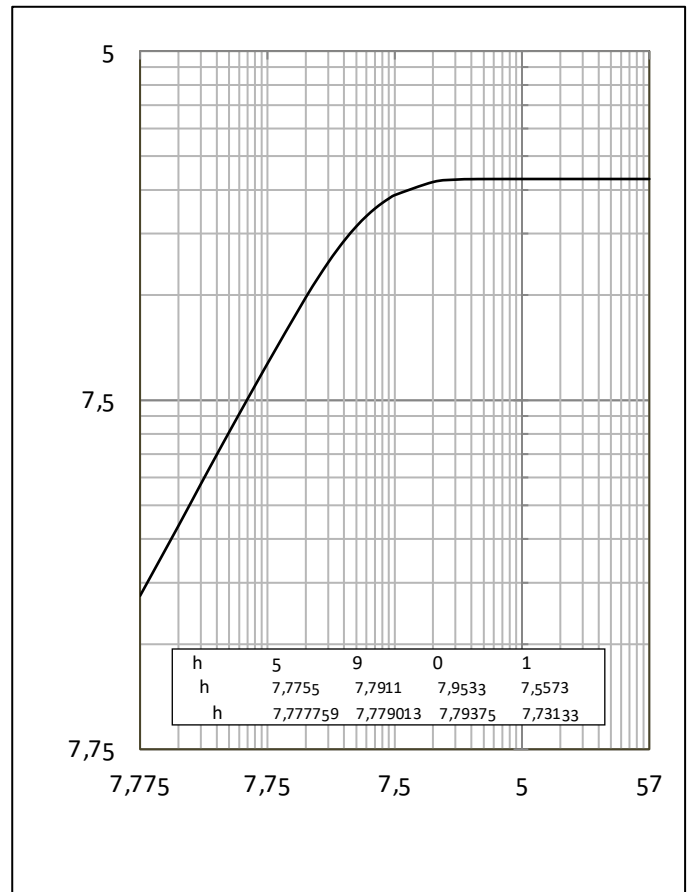
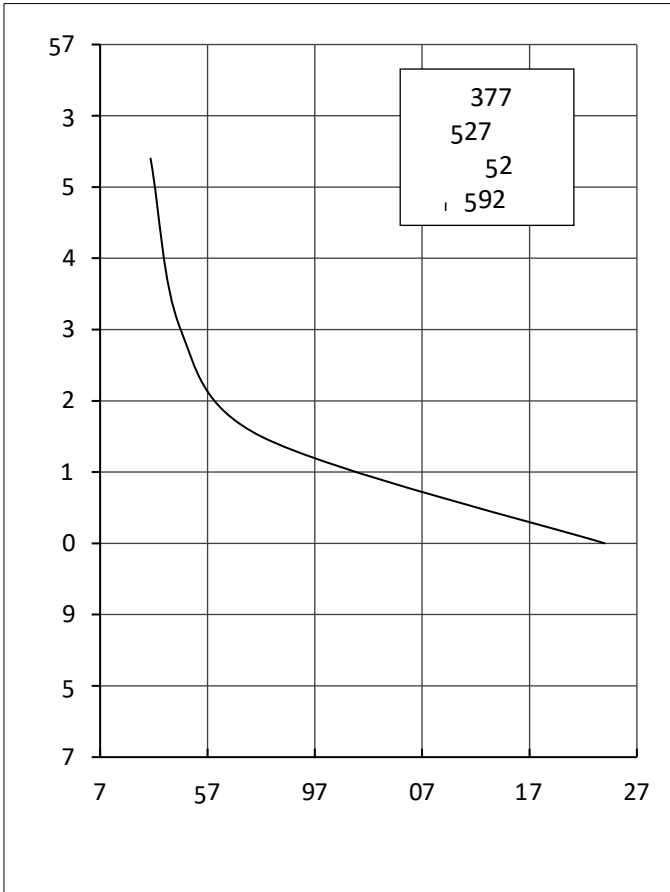


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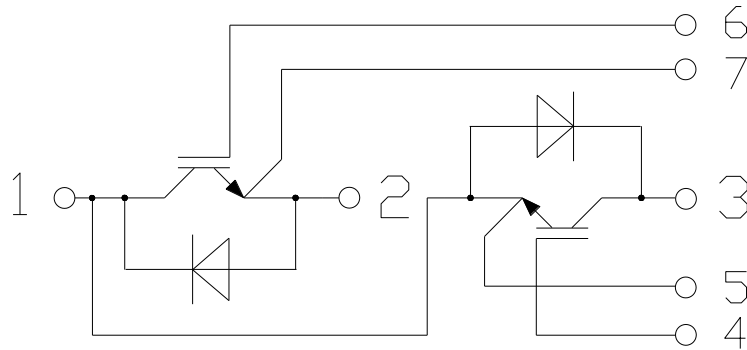
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● Circuit Diagram



● Package Outline Information

Dimensions in Millimeters

