

For DC Load Only Low ON Resistance Type Optical MOS Relay

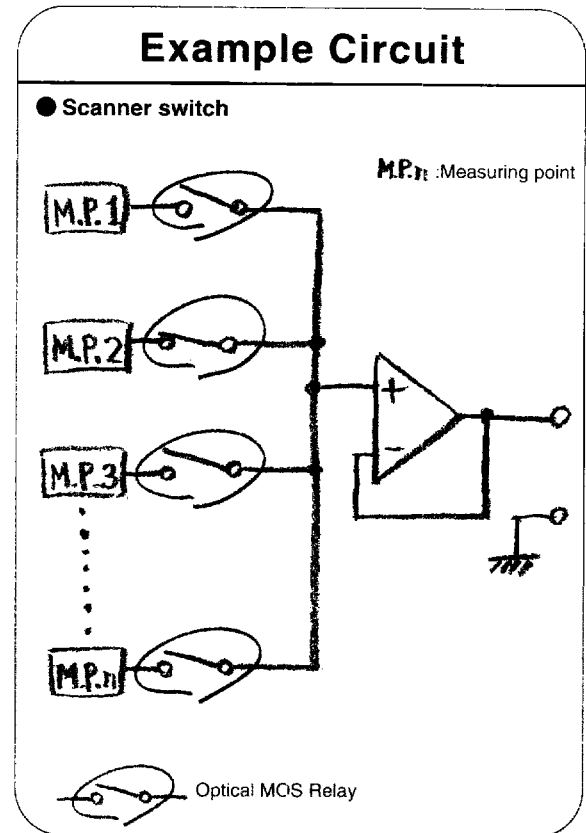
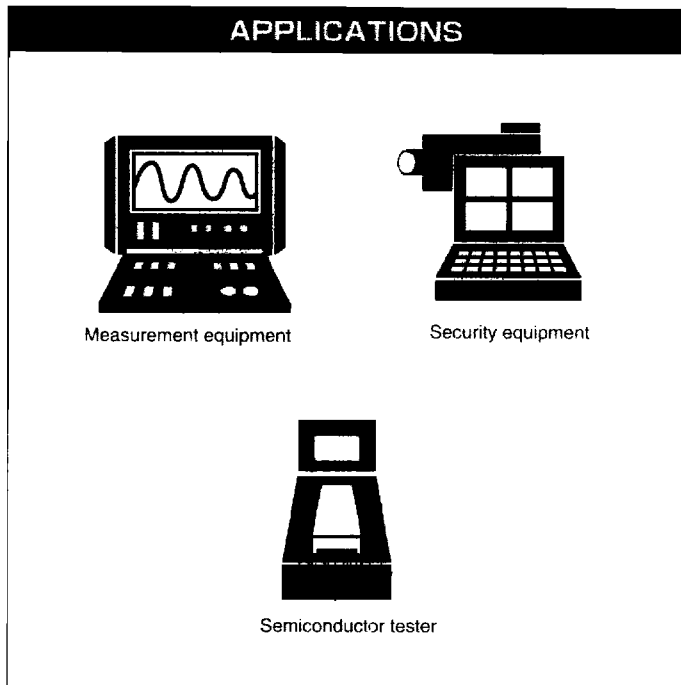
OCM1 □ 2, 1 □ 3 series

- Low on resistance ▶ 0.5~6.2 Ω
- Load current ▶ 500~200 mA
- Recommended input current ▶ 10 mA

Absolute maximum ratings

(Ambient temperature Ta=25°C)

		Product name			OCM102 OCM103	OCM112 OCM113	OCM122 OCM123	OCM142 OCM143
Item	Symbol	Condition	Unit					
Input characteristics	Continuous forward current	I _F		mA	50			
	Derating factor of continuous forward current	ΔI _F		mA/°C	Refer to [Derating Factor of Continuous Forward current] of characteristics data			
	Peak forward current	I _{FM}	Pulse width 100 μs Cycle 10ms	A	0.5			
	Reverse voltage	V _R		V	5			
	Power dissipation	P _{DL}		mW	75			
Output characteristics	Load voltage	V _{OFF}		V	60	100	200	400
	Load current	I _{ON}		mA	500	450	350	200
	Derating factor of load current	ΔI _{ON}		mA/°C	Refer to [Derating Factor of Load Current] of characteristics data			
	Surge load current	I _{SUG}	Pulse width 1ms 1shot	A	3.5			1.5
	Power dissipation	P _D		mW	300			
	Total power dissipation	P _{tot}		mW	325			
Isolation voltage	V _{IO}		V(rms)	1500				
				OCM102	OCM112	OCM122	OCM142	
				4000				
				OCM103	OCM113	OCM123	OCM143	
Operating temperature	T _{opr}		°C	-40~+85				
Storage temperature	T _{stg}		°C	-40~+100				



Electrical characteristics

(Ambient temperature Ta=25°C)

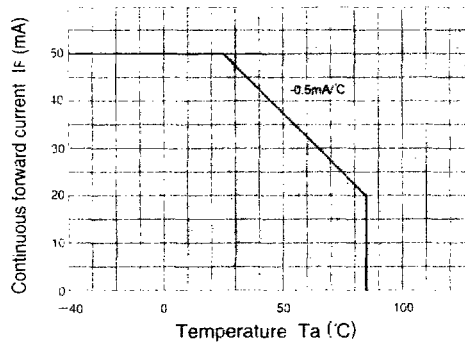
Product name					OCM102 OCM103	OCM112 OCM113	OCM122 OCM123	OCM142 OCM143	
Item	Symbol	Condition	Unit						
Input characteristics	Forward voltage	V _F	I _F =10mA	MIN			1.0		
				MAX			1.3		
	Reverse current	I _R	V _R =5V	MAX	μA		10		
	Operation input current ^{*1}	I _{FA}	I _{ON} =100mA	MAX	mA		5		
Recovery input current	I _{FR}	V _{OFF} =Rating I _{ON} =100 μA	MIN	mA		0.2			
Output characteristics	On-resistance	R _{ON}	I _F =10mA I _{ON} =100mA <small>Time to flow current is within one second</small>	MIN		0.2	0.3	1.0	3.0
				TYP		0.5	0.7	1.5	4.5
				MAX		0.75	1.0	2.0	6.2
Off-state leakage current ^{*2}	I _{OFF}	V _{OFF} =Rating	MAX	μA		1.0			
Output terminal capacitance	C _{OUT}	V _{OFF} =50V f=1MHz	TYP	pF	70	50	35	25	
Input-to-output capacitance	C _{IO}	f=1MHz	TYP	pF			1.3		
Coupling characteristics	Turn on time ^{*3}	t _{on}	I _F =10mA I _{ON} =100mA	TYP	ms		0.3		
				MAX			1.0		
	Turn off time ^{*3}	t _{off}	I _F =10mA I _{ON} =100mA	TYP	ms			0.2	
				MAX			1.0		

*1 : Can correspond to special specification I_{FA} < 3.0mA

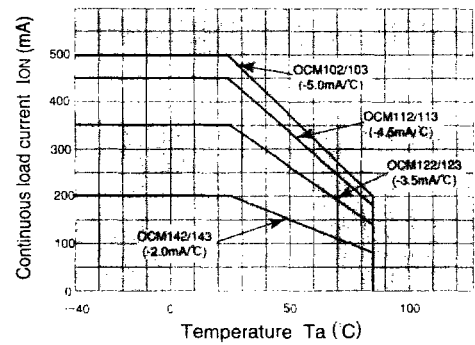
*2 : Can correspond to special specification I_{OFF} < 1.0μA

*3 : Can correspond to special specification t_{on} / t_{off} < 0.5ms

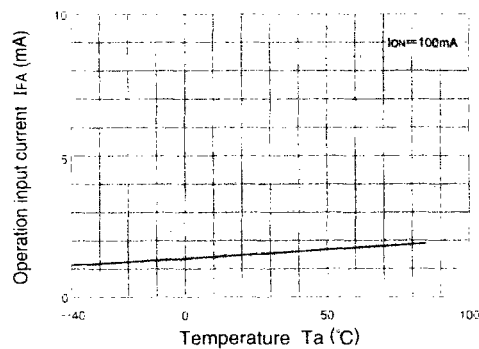
OCM1 □ 2, 1 □ 3 series Characteristics Curves



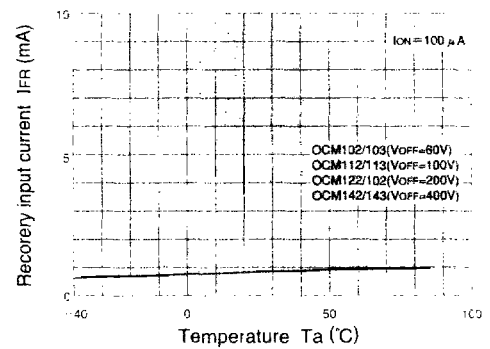
Derating factor of continuous forward current



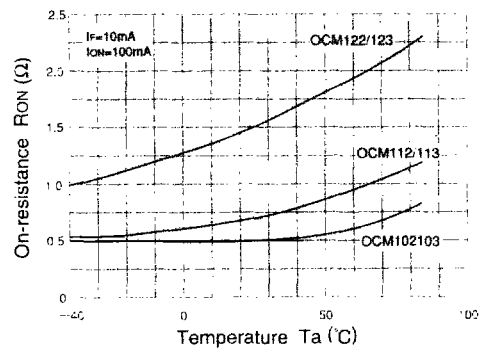
Derating factor of load current



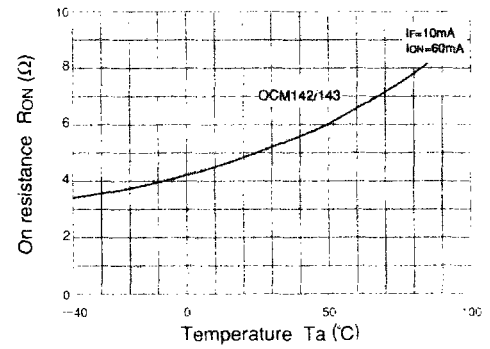
Operation input current vs. Ambient temperature



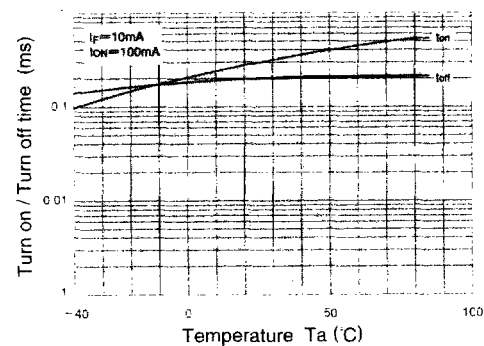
Recovery input current vs. Ambient temperature



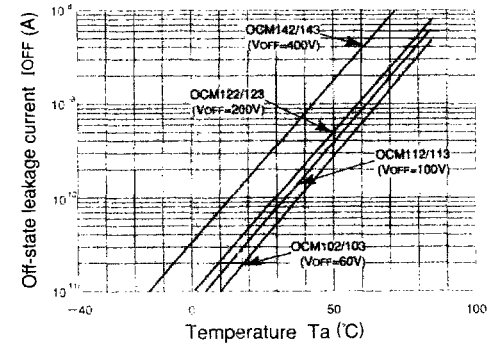
On-resistance vs. Ambient temperature-1



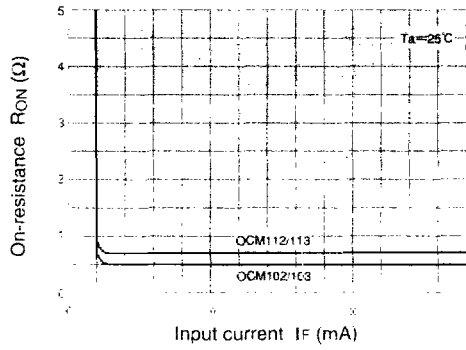
On-resistance vs. Ambient temperature-2



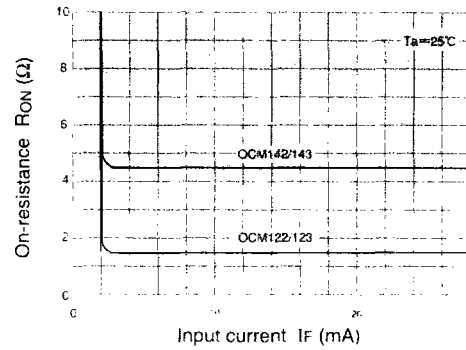
Turn on/Turn off time vs. Ambient temperature



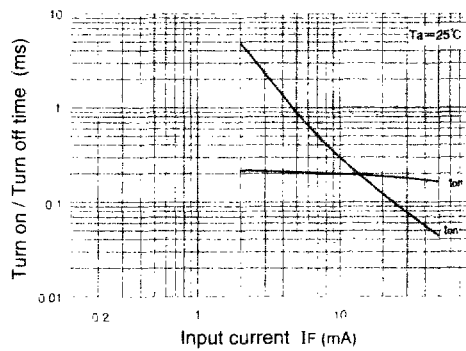
Off-state leakage current vs. Ambient temperature



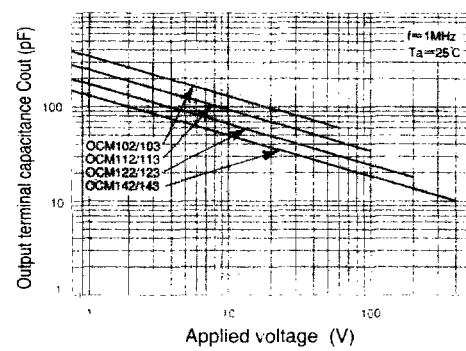
Continuous forward current vs. on-resistance-1



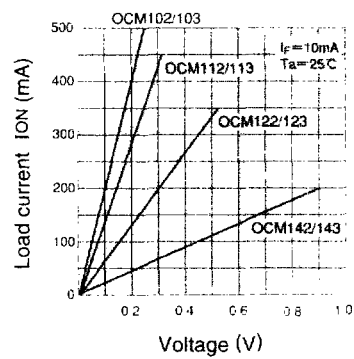
Continuous forward current vs. On-resistance-2



Continuous forward current vs. Turn on/Turn off time



Output terminal capacitance vs. Applied voltage



Load current vs. Voltage