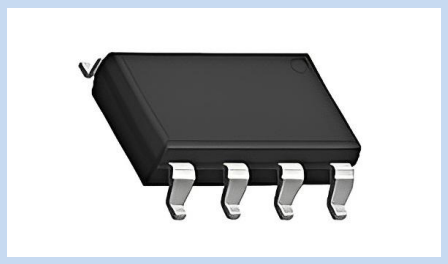
SSR Relay NC-1Bx2
AC/DC 400V 0.12A SMD-8

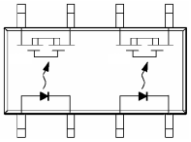
SSR2B2GA128S

MERITEK

FEATURE

- **Normally Close (2-Form-B) Solid State Relay**
- **AC/DC Output Load Compatible**
- **Isolation Voltage: 3750/5000 Vrms**
- **Application: Programmable Controller, Industrial I/O Module, Communication Equipment Protection**
- **In Accordance with Safety Class UL 1577 Standard**





MAXIMUM RATINGS

Parameter		Symbol	Value	Unit
Input Continuous LED Current		I_F	50	mA
Input Peak LED Current	f=100Hz, duty=1%	I_{FP}	1	A
Input LED Reverse Voltage		V_R	5	V
Input Power Dissipation		P_{In}	75	mW
Output Load Voltage	AC peak or DC	V_L	400	V
Output Load Current		I_L	120	mA
Output Peak Load Current	1ms (1 pulse)	I_{Peak}	300	mA
Output Power Dissipation		P_{out}	500	mW
Total Power Dissipation		P_T	550	mW
Isolation Voltage	AC for 60sec, RH60%	V_{ISO}	3750	V_{RMS}
Isolation Voltage (Suffix-V)			5000	
Operating Temperature Range		T_{Opr}	-40~+85	°C
Storage Temperature Range		T_{Stg}	-40~+100	°C
Soldering Temperature	For 10 sec	T_{SOL}	260	°C

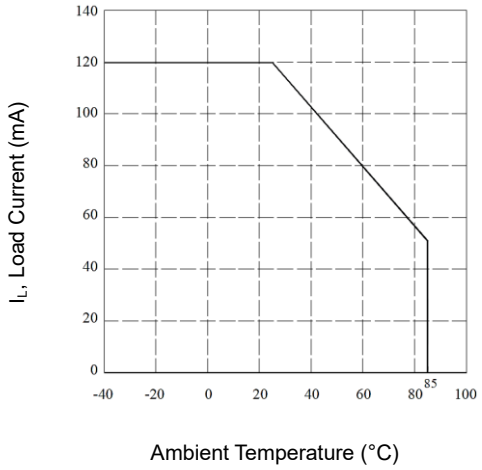
ELECTRICAL CHARACTERISTICS

Input Characteristics	Conditions	Symbol	Min	Typ.	Max	Unit
LED Forward Voltage	I_F=10mA	V_F	--	1.2	1.5	V
Operation LED Current	--	$I_{F(On)}$	--	0.5	5.0	mA
Recovery LED Current	--	$I_{F(Off)}$	--	0.35	0.5	mA
Recovery LED Voltage	--	$V_{F(Off)}$	0.5	--	--	V
Output Characteristics	**Conditions**	**Symbol**	**Min**	**Typ.**	**Max**	**Unit**
On-Resistance	I_F=0A, I_L=100mA, Time to flow is within 1 sec	$R_{(On)}$	--	20	50	Ω
Off-State Leakage Current	I_F=5mA, V_L=400V	I_{Leak}	--	--	10	μA
Output Capacitance	I_F=5mA, V_L=0V, f=1MHz	C_{Out}	--	165	--	pF
Transmission Characteristics	**Conditions**	**Symbol**	**Min**	**Typ.**	**Max**	**Unit**
Turn-On Time	I_F=10mA, I_L=100mA	t_{on}	--	0.02	1.0	ms
Turn-Off Time		t_{off}	--	0.5	3.0	ms
Coupled Characteristics	**Conditions**	**Symbol**	**Min**	**Typ.**	**Max**	**Unit**
I/O Isolation Resistance	V_{IO}=500V_{DC}	$R_{I/O}$	10^{10}	--	--	Ω
I/O Capacitance	f=1MHz	$C_{I/O}$	--	0.8	--	pF

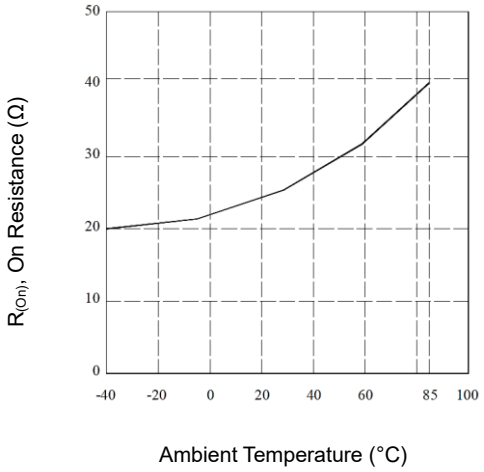
Note: T_A=25˚C unless otherwise noted.

CHARACTERISTIC CURVES

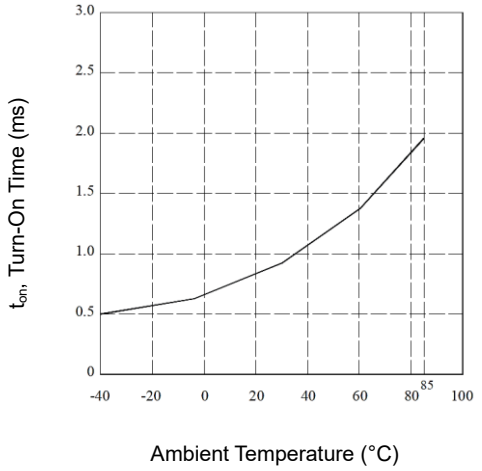
Load Current vs. Temperature



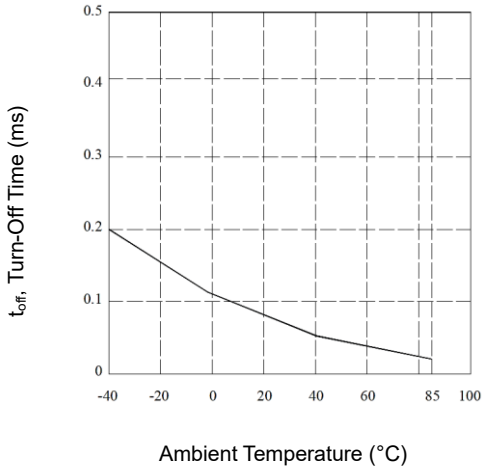
On Resistance vs. Temperature



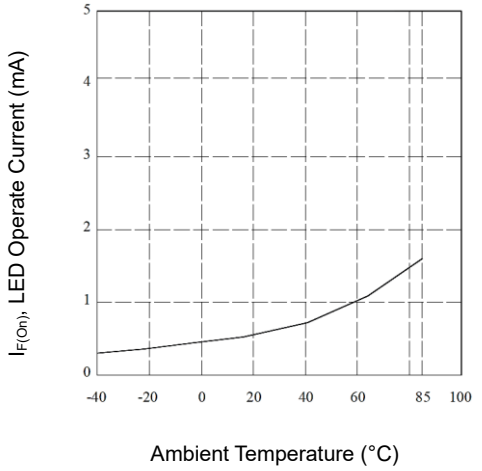
Turn-On Time vs. Temperature



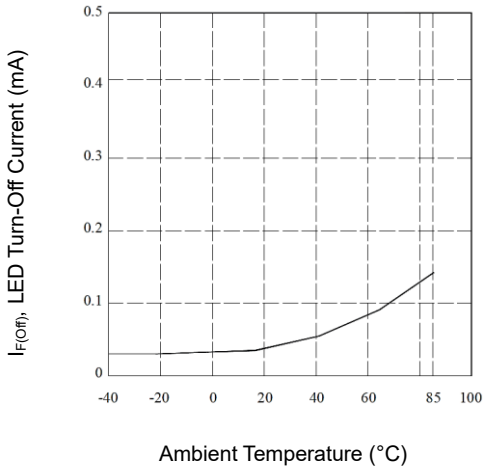
Turn-Off Time vs. Temperature



LED Operate Current vs. Temperature

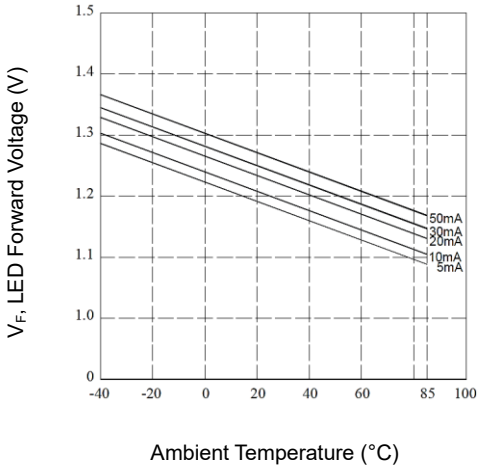


LED Turn-Off Current vs. Temperature

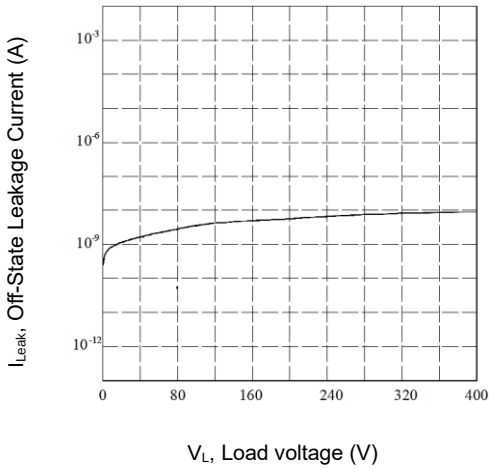


CHARACTERISTIC CURVES

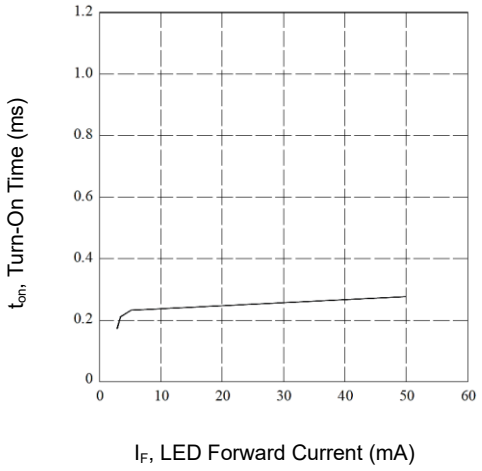
LED Forward Voltage vs. Temperature



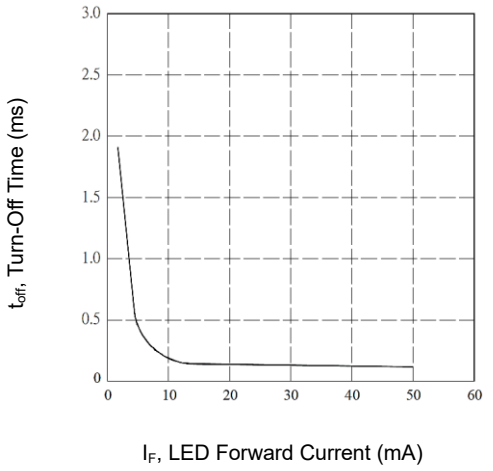
Off-State Leakage Current vs. Load Voltage



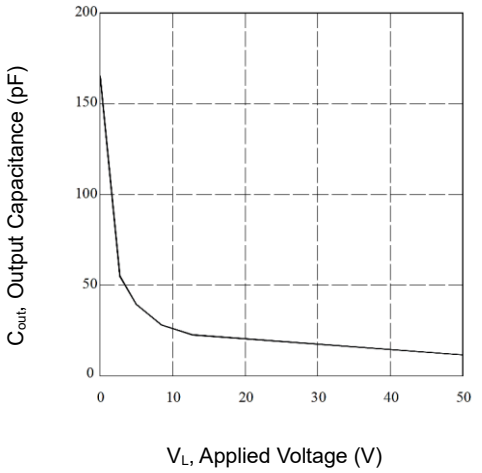
LED Forward Current vs. Turn-On Time



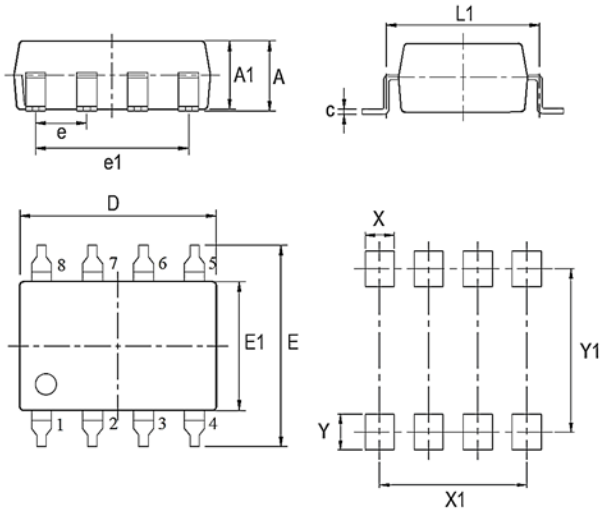
LED Forward Current vs. Turn-Off Time



Applied Voltage vs. Output Capacitance



DIMENSIONS

Item	Min (mm)	Max (mm)
A	3.30	3.70
A1	3.20	3.60
c	0.25	
D	9.60	10.00
E	9.80	10.20
E1	6.20	6.60
e	2.54	
e1	5.08	
L1	7.42	7.82
X	1.50	
X1	7.22	8.02
Y	1.90	
Y1	8.60	8.80

Note:
1,3.LED Anode; 2,4.LED Cathode; 5,6. Drain (MOSFET); 7,8. Drain (MOSFET)