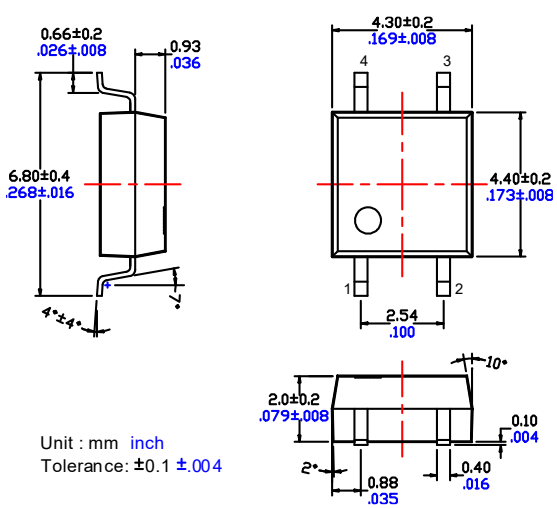
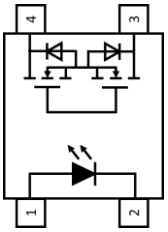
Miniature SOP-4pin type of 600V load voltage	PHOTO DMOS RELAY AY60S 1 From A

E504629





1. LED Anode
2. LED Cathode
3. MOSFET Drain
4. MOSFET Drain

FEATURE

1.Continuous load current: Max. 80mA
2.Load on resistance: Typ. 35
3.Loading voltage 600DC or AC peak.
4.Off-state leakage current: 1μA.

TYPICAL APPLICATIONS

- Measurement and test equipment
- Telecommunications
- Security equipment
- Industrial machinery and equipment

Absolute maximum ratings (Ambient temperature 25 ℃)

Item		Symbol	Value	Units	Not
Input	Continuous LED current	I_F	50	mA	
	Peak LED current	I_{FP}	1000	mA	f=100Hz, DC 1%
	LED reverse voltage	V_R	5	V	
	Input power dissipation	P_{in}	75	mW	
Output	Load voltage	V_L	600	V	DC or AC peak
	Load current	I_L	80	mA	
	Peak load current	I_{peak}	120	mA	100ms(1 pulse)
	Output power dissipation	P_{out}	450	mW	
Total power dissipation		P_T	500	mW	
I/O isolation voltage		V_{iso}	1500	Vrms	RH 60, 1min
Operating temperature		T_{opr}	-40o +85	℃	
Storage temperature		T_{stg}	-40 to +100	℃	
Soldering temperature		T_{sol}	260	℃	10sec max.

Electrical specifications (Ambient temperature 25 ℃)

Item		Symbol	Min.	Typ.	Max.	Units	Condition
Input	LED foreward voltage	V_F		1.2	1.4	V	I_F=10mA
	Operating LED current	I_{Fon}		0.5	2.0	mA	
	Recover LED current	I_{Foff}	0.1	0.35		mA	
	Recover LED voltage	V_{Foff}	0.5			V	
Output	On resistance	R_{on}		35	50	Ω	I_F=5mA, I_L=80mA
	Off-state leakage current	I_{leak}			1.0	μA	V_L=Rating
	Output capacitance	C_{out}		100		pF	V_L=0V, f=1MHz
Trasmission	Turn on time	T_{on}		0.3	1.0	ms	I_F=5mA, I_L=80mA
	Turn off time	T_{off}		0.02	0.2	ms	
Coupled	I/O isolation resistance	$R_{I/O}$	10^9			Ω	DC 500V
	I/O capacitance	$C_{I/O}$		0.8	1.5	pF	f=1MHz

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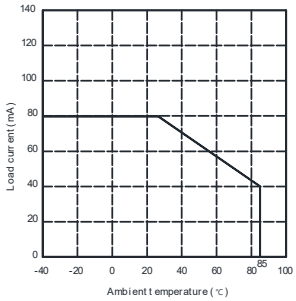
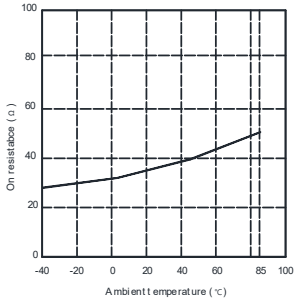
Reference data

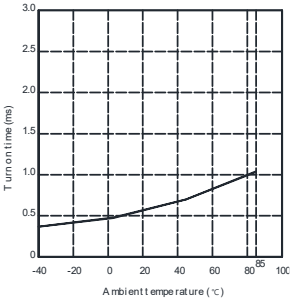
Load current vs. Ambient temperature



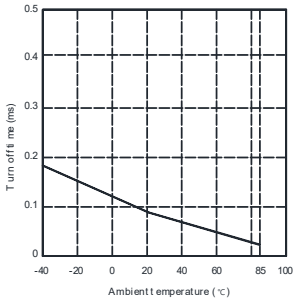
On resistance vs. Ambient temperature



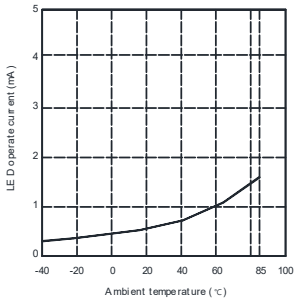
Turn on time vs. Ambient temperature



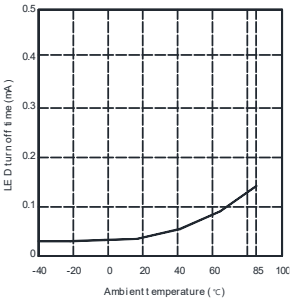
Turn off time vs. Ambient temperature



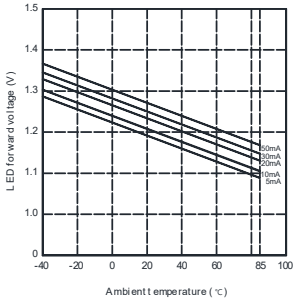
LED operate current vs. Ambient temperature



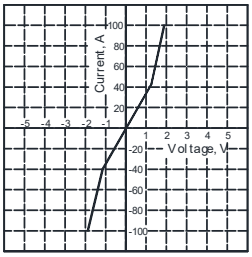
LED turn off current vs. Ambient temperature



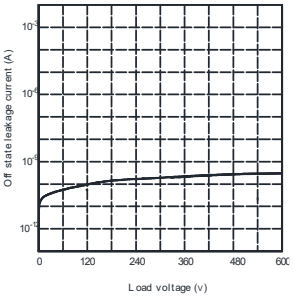
LED forward voltage vs. Ambient temperature



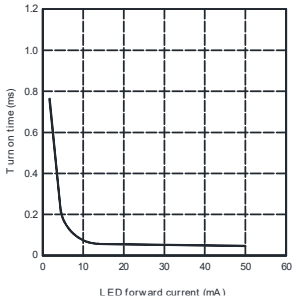
Voltage vs. current characteristics of output at MOS portion



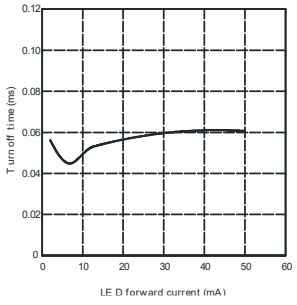
Off state leakage current vs. Load voltage characteristics



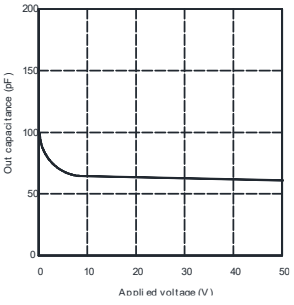
LED forward current vs. Turn on time characteristics



LED forward current vs. Turn off time characteristics



Applied voltage vs. Output capacitance characteristics



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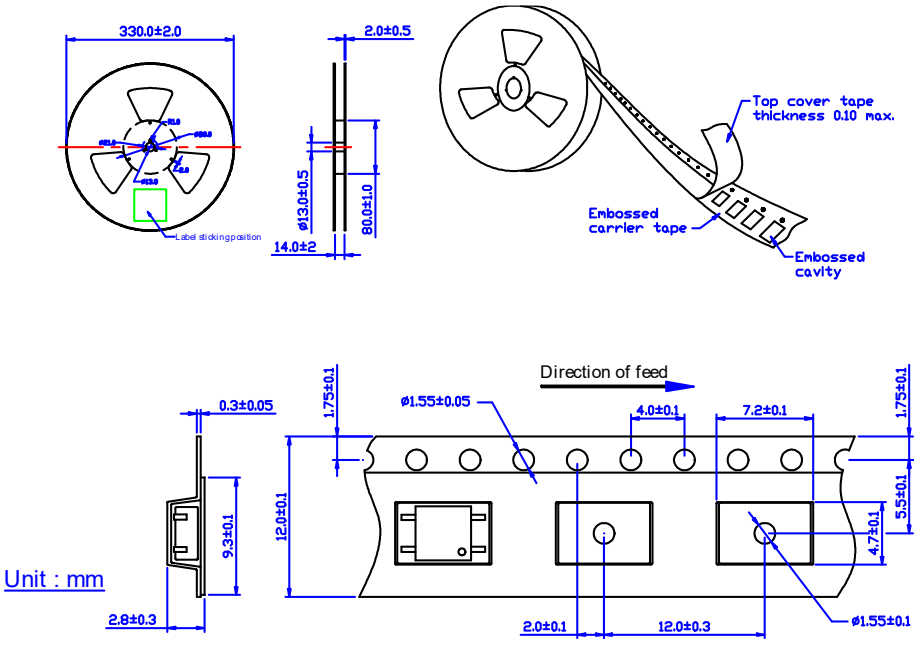
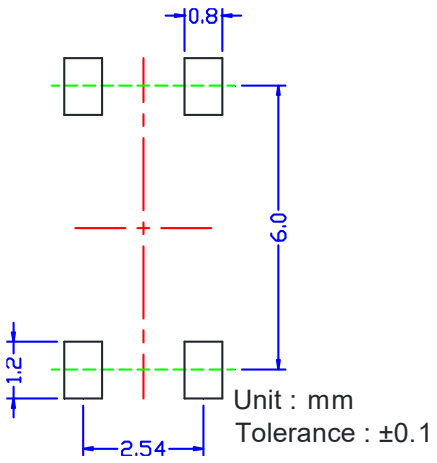
Taping specifications for surface mount devices



Package	Part No.		Packing quantity	
	Tube packing	Tape & Reel packing	Tube	Tape & Rell
SOP4	AY60S	AY60S-R1	100pcs/1tube	2000 pcs

Dimension

Recommended mounting pad



Marking

(Each photo MOS Relay shall be marked with the following information)

YY : Year, M : Monthly, W : Weeks