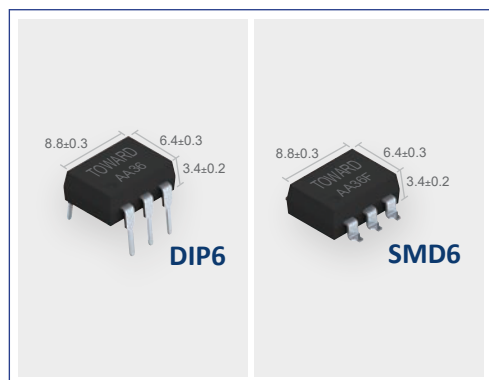


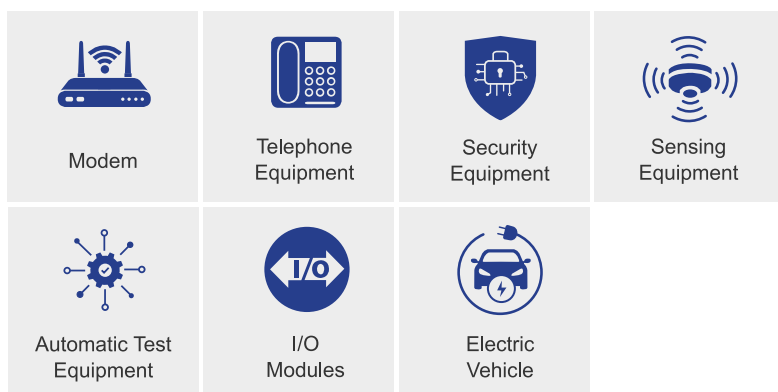


36 SERIES

OPTO-MOSFET 2.5A • 1a



APPLICATIONS



KEY FEATURES

- High voltage with low on-resistance
- Fast reverse recovery time
- High avalanche ruggedness
- DIP and SMD type

SPECIFICATIONS

ITEMS		PERFORMANCE CHARACTERISTICS
Contact Form		1a
Load Voltage	VL	60V
Operation LED Current	IF ON	3.0mA
Load Current	IL	2.5A
On-Resistance	RON	0.07Ω
Output Capacitance	COU	470pF
Low Off-State Leakage Current	I _{LEAK}	1.0μA

PIN DESCRIPTION & PART NUMBER

CIRCUIT DIAGRAM	PIN DESCRIPTION	PART NO.	PACKAGE	PACKING
	1: Anode (+) • LED 2: Cathode (-) • LED 3: NC 4,6: Drain • MOSFET 5: Source • MOSFET	AA36 AA36F AA36F-R1	DIP6 SMD6 SMD6	Tube (50pcs) Tube (50pcs) Reel (1000pcs)

ABSOLUTE MAXIMUM RATINGS (Ambient Temperature 周圍溫度：25°C)

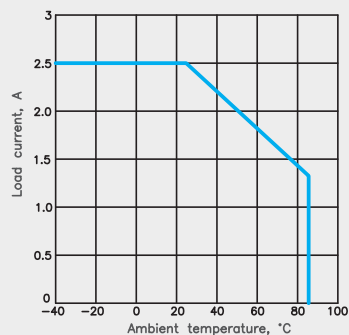
ITEM		CONDITION	SYMBOL	VALUE	UNIT
Input 輸入	Continuous LED Current 連續 LED 電流		I _F	50	mA
	Peak LED Current LED 峰值電流	f=100Hz, Duty=1%	I _{FP}	500	mA
	LED Reverse Voltage 逆向 LED 電壓		V _R	5	V
	Input Power Dissipation 輸入損耗		P _{IN}	75	mW
Output 輸出	Load Voltage 負荷電壓		V _L	60	(AC peak or DC) V
	Load Current 負荷電流		I _L	2.5	A (AC or DC) A
				3.5	B (DC) A
				5.0	C (DC) A
	Peak Load Current 峰值負荷電流	1ms, 1shot	I _{PEAK}	6.0	A
	Output Power Dissipation 輸出損耗		P _{OUT}	500	mW
Relay 繼電器	Total Power Dissipation 全損耗		P _T	550	mW
	I/O Breakdown Voltage 入/出力間絕緣電壓		V _{I/O}	3750	V _{rms}
	I/O Breakdown Voltage 入/出力間絕緣電壓	Suffix-H	V _{I/O}	5000	V _{rms}
	Operating Temperature 使用時溫度		T _{OPR}	-40 ~ +85	°C
	Storage Temperature 保存溫度		T _{STG}	-40 ~ +100	°C

ELECTRICAL SPECIFICATIONS (Ambient Temperature 周圍溫度：25°C)

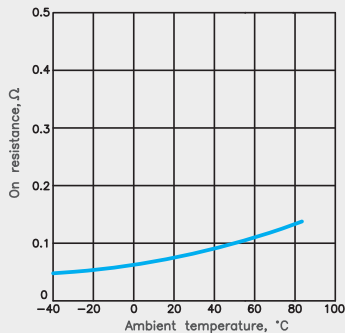
ITEM		CONDITION	SYM.	MIN.	TYP.	MAX.	UNIT
Input 輸入	LED Forward Voltage LED 順向電壓	I _F =10mA	V _F	1.0	1.37	1.5	V
	Operation LED Current LED 動作電流		I _{F ON}		1.5	3.0	mA
	Recovery LED Voltage LED 復位電壓		V _{F OFF}	0.5	1.0		V
Output 輸出	On-Resistance 導通電阻 Drain to Drain	I _F =10mA, I _L =Rating (within 1sec.)	R _{ON}		0.07	0.1	Ω
	Off-State Leakage Current 開路狀態漏電流	I _F =0mA, V _L =60V	I _{LEAK}			1.0	μA
	Output Capacitance 輸出端容量	V _L =0V, f=1MHz	C _{OUT}		470		pF
Transmission 傳達	Turn-On Time 動作時間	I _F =10mA, I _L =Rating	T _{ON}		0.6	3.0	ms
	Turn-Off Time 復位時間	I _F =10mA, I _L =Rating	T _{OFF}		0.04	0.5	ms
Coupled 結合	I/O Insulation Resistance 輸入/ 出間絕緣阻抗		R _{I/O}	5 x 10 ⁹			Ω
	I/O Capacitance 輸入/ 力端靜電容量	f=1MHz	C _{I/O}		1		pF

REFERENCE DATA

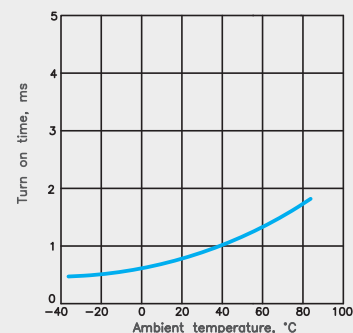
Load current vs. Ambient temp.



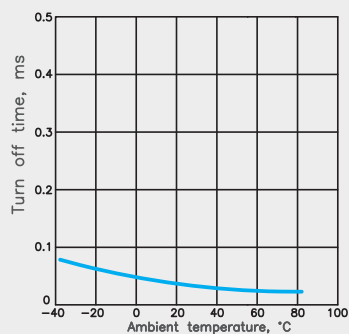
On resistance vs. Ambient temp.



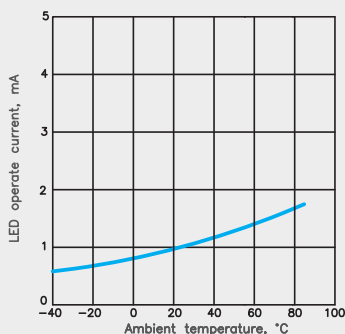
Turn on time vs. Ambient temp.



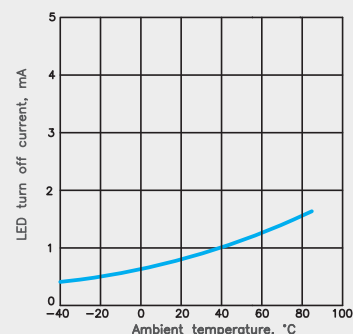
Turn off time vs. Ambient temp.



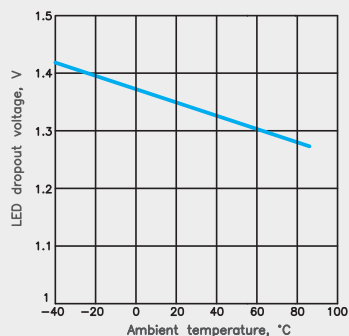
LED operate current vs. Ambient temp.



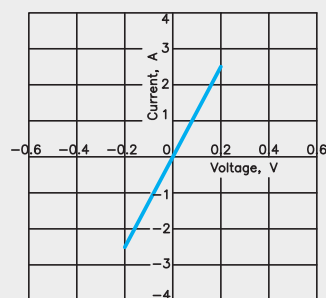
LED turn off current vs. Ambient temp.



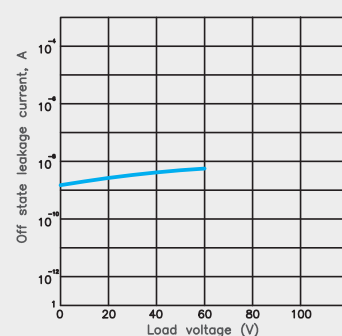
LED forward voltage vs. Ambient temp.



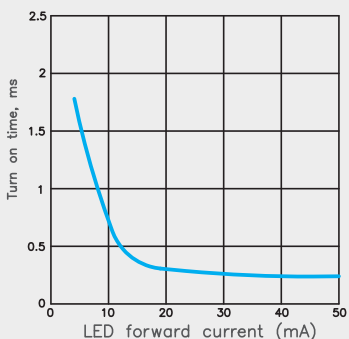
Current vs. Voltage characteristics of output at MOS portion



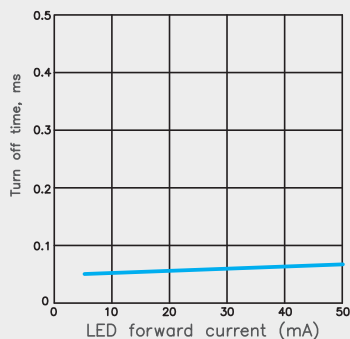
Off state leakage current vs. Load voltage



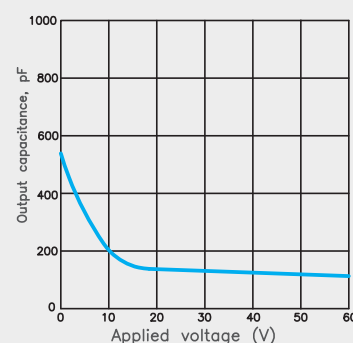
Turn on time vs. LED forward current



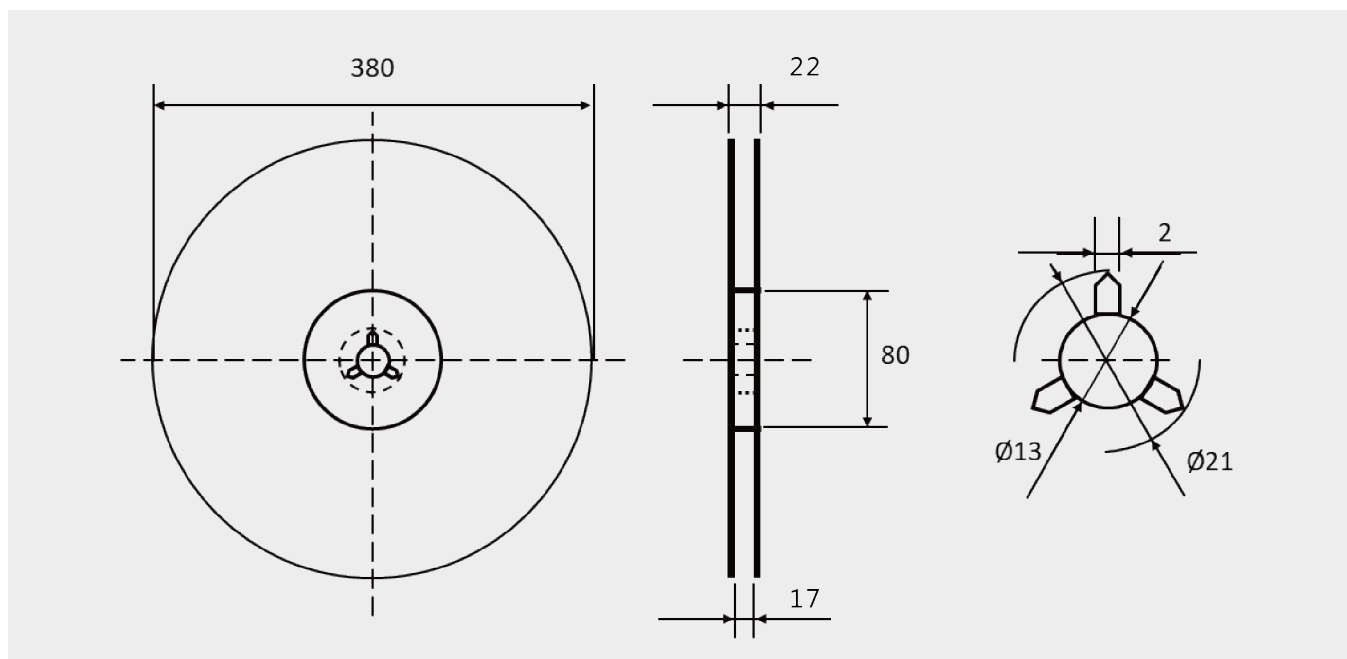
Turn off time vs. LED forward current



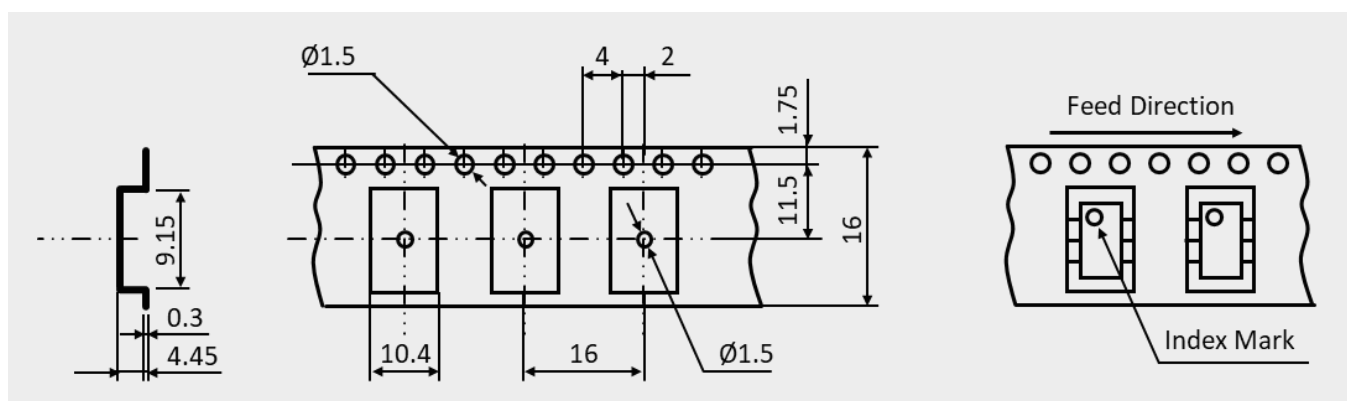
Output capacitance vs. Applied voltage



REEL DIMENSIONS (All dimensions in mm)



TAPE DIMENSIONS (All dimensions in mm)



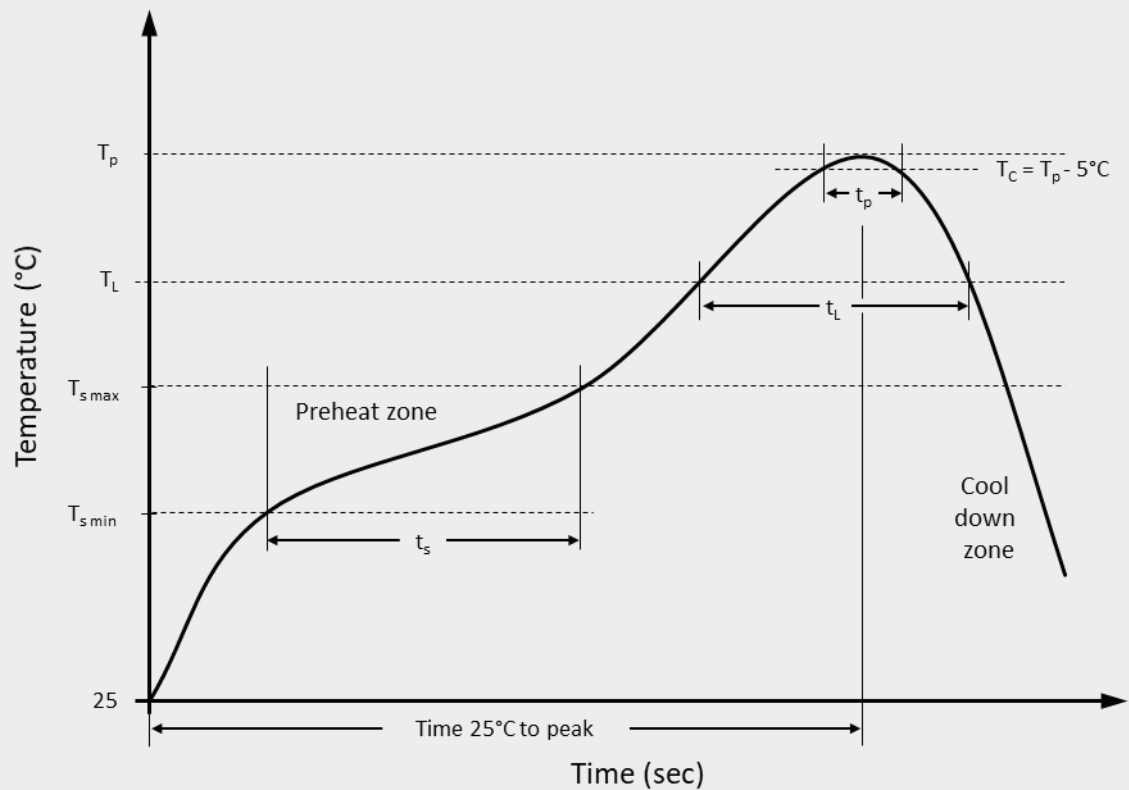
TAPE AND REEL PACKING	PCS/REEL
SMD 6	1000

TUBE PACKING	PCS/TUBE	TUBES/BOX	UNITS/BOX
SMD 6	50	30	1500
DIP 6	50	30	1500

STORAGE AND HANDLING CONDITIONS

ESD LEVEL	FLOOR LIFE	CONDITION	MSL
HBM class 2	Unlimited	T _A < 30°C, RH < 85%	3

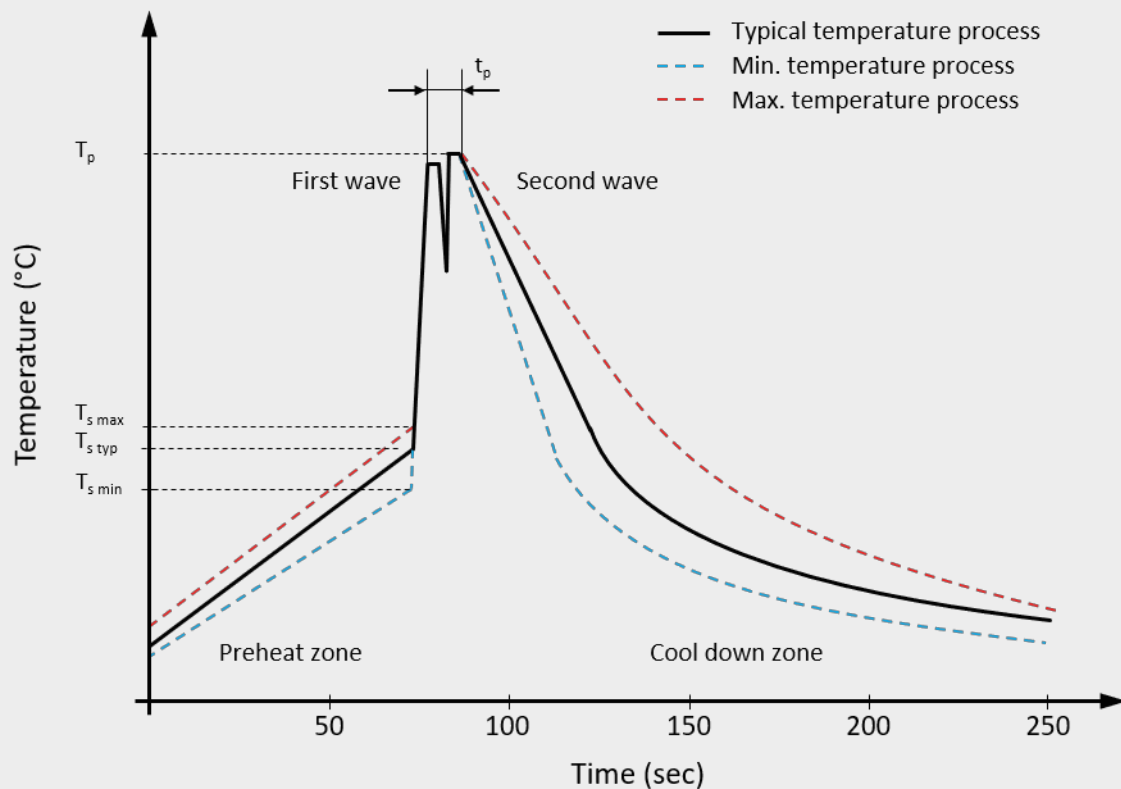
RECOMMENDED REFLOW SOLDERING PROFILE (SMD PACKAGE)



RECOMMENDED REFLOW SOLDERING CONDITIONS

PROFILE FEATURES		PB-FREE ASSEMBLY
Preheat temperature min.	$T_{s\ min}$	150°C
Preheat temperature max.	$T_{s\ max}$	200°C
Preheat time T_s from $T_{s\ min}$ to $T_{s\ max}$	T_s	120 seconds
Ramp-up rate (T_L to T_P)		max. 3°C / second
Liquidous temperature	T_L	217°C
Time T_L maintained above T_L	T_L	60 seconds max.
Peak package body temperature	T_P	260°C
Timeframe of within 5°C below and up to max actual peak body temperature	T_P	30 seconds max.
Ramp-down rate (T_L to T_P)		max. 6°C / second
Time 25°C to peak temperature		max. 8 minutes

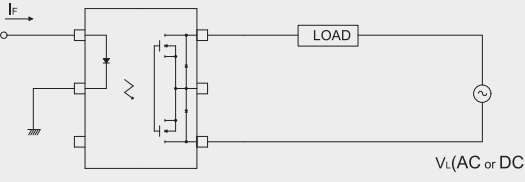
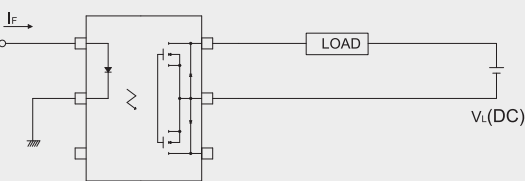
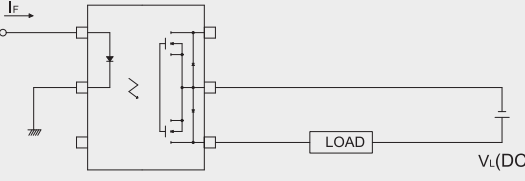
RECOMMENDED WAVE SOLDERING PROFILE (THT PACKAGE)



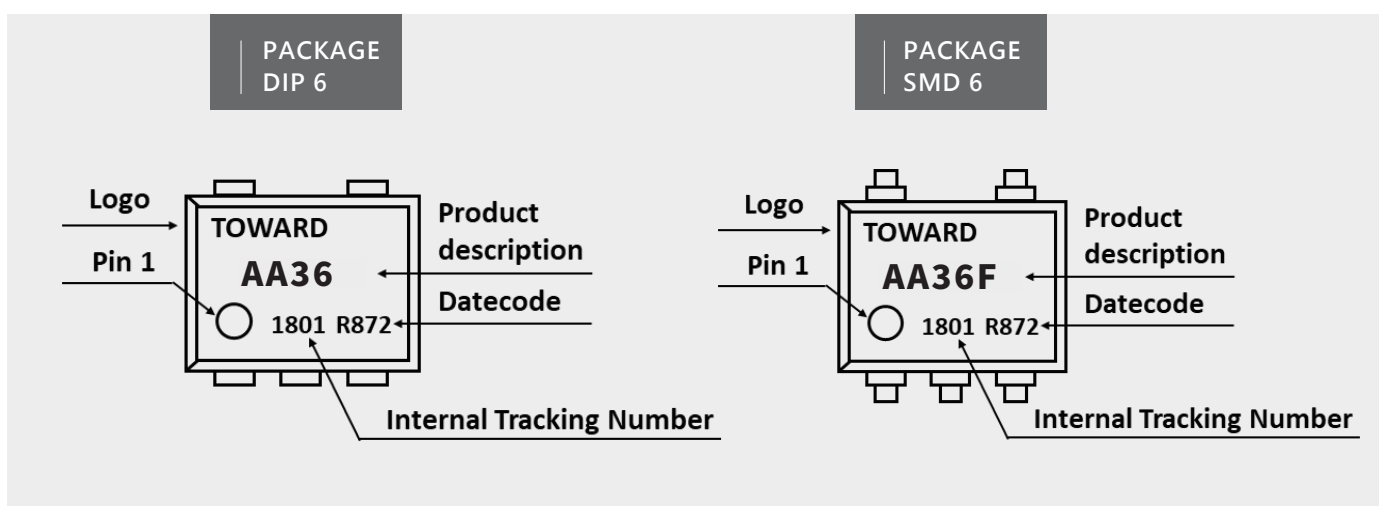
CLASSIFICATION WAVE SOLDERING PROFILE

PROFILE FEATURES		VALUE • PB-FREE ASSEMBLY
Preheat temperature min.	$T_s\ MIN$	100°C
Preheat temperature typical	$T_s\ TYP$	120°C
Preheat temperature max.	$T_s\ MAX$	130°C
Preheat time T_s from $T_s\ MIN$ to $T_s\ MAX$	T_s	70 seconds
Peak temperature	T_p	245°C ~ 260°C
Time of actual peak temperature	T_p	Max. 10 seconds Max. 5 second each wave
Ramp-down rate min.		~ 2°C / second
Ramp-down rate typical		~ 3.5°C / second
Ramp-down rate max.		~ 5°C / second
Time 25°C to 25°C		4 minutes

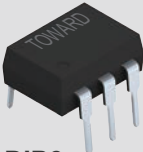
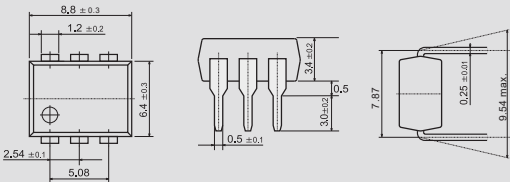
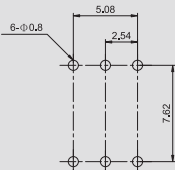
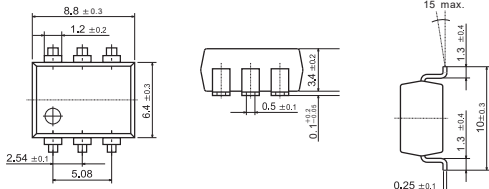
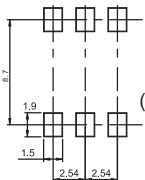
LOAD CONNECTING METHOD

TYPE	LOAD	CONNECTION	FEATURE
6 Pin	A AC or DC		Control bi-directional signal 可控制雙向信號
	B DC		On-Resistance is 1/2 of A-connection 導通電阻值是A接法的1/2
	C DC		2-Make-contacts (Source Common) On-Resistance is 1/2 of B-connection 導通電阻值是B接法的1/2

PRODUCT MARKING



PACKAGE & PC BOARD PATTERN

PACKAGE	DIMENSIONS	PC BOARD PATTERN
 DIP6		 (Bottom View)
 SMD6		 (Top View)